

JOURNAL
OF THE
ANTHROPOLOGICAL INSTITUTE
OF GREAT BRITAIN AND IRELAND.

ORDINARY MEETING.

FEBRUARY 14TH, 1899.

C. H. READ, Esq., F.S.A., *President, in the Chair.*

The Minutes of the last Meeting were read and signed.

The election of four new Fellows was announced, viz.:—ANDREW LANG, Esq., W. L. H. DUCKWORTH, Esq., T. T. GREG, Esq., and Dr. A. L. BENNETT.

It was stated that Mr. Edge-Partington had presented the Institute with a copy of the Third Series of his work, *Ethnographical Album of the Pacific Islands*, and a vote of thanks was carried.

Attention was called to a large collection of photographs which had been lent for an Evening Meeting by Mr. Guthrie Watson, and letters from that gentleman, relating to them, were read by the Secretary. A vote of thanks was passed to Mr. Watson for the exhibition.

The PRESIDENT introduced Colonel Sir T. H. HOLDICH, K.C.I.E., C.B., who proceeded to read his paper on "The Arabs of the Indian Frontier."

The discussion that followed was carried on by Mr. CROOKE, Dr. J. BEDDOE (who sent in a short paper), Mr. KENNEDY, Mr. A. L. LEWIS, and others.

The PRESIDENT pointed out the great importance of such papers, and the Meeting closed with a hearty vote of thanks to Sir Thos. Holdich.

SWATIS AND AFRIDIS.

By COLONEL SIR T. H. HOLDICH, K.C.I.E., C.B.

OUR recent campaigns in Northern India have been directed against tribespeople who have from time immemorial occupied a mountainous borderland separating the highlands of Afghanistan from the plains of the Punjab. Only recently has this border strip of territory been formed into an independent province by the demarcation of a boundary which, whilst it effectually shuts off Afghanistan, does not include this strip within British territory. We still leave these people alone, free to govern themselves after their own patriarchal system--a system which leaves much to be desired as regards our future safeguards against periodic outbreaks of fanatical hostility.

The original Paktun, or Pathán, inhabitants of these western gates of India are recognised in very early history, many of the tribes being mentioned by Herodotus, and by the historians of Alexander. In mediæval times the rough uncultivated wilderness of mountains that they held was called Roh, and its inhabitants Rohillas, and there can be little doubt that most of these early Rohilla, or Pathán, tribes were in their places long before the overlying Afghans were thought of. All Afghans are now numbered amongst Patháns, because they all speak the Pathán language, Pushtu, but they acknowledge no direct kinship with the Rohilla, declaring themselves to be Ben-i-Israel, the descendants of those tribes who were carried captive to Babylon by Nebuchadnezzar. All of them have however adopted the Pushtu tongue, and all recognise the same Pathán code of common civil observances called "Paktun-wali," which is, in many of its provisions, curiously suggestive both of the old Mosaic dispensation, and of ancient rites and observances of the Rajput races.

Thus the Patháns with whom we have lately been so largely concerned may be divided into two great communities, *i.e.*, those tribes such as Waziris, Afridis, Orakzais, etc., who are possibly of Indian origin, and those who are Afghans and claim to be Semitic, who represent the dominant race throughout our frontier; and it seems at least to be possible that the Paktunwali, which is an unwritten code, acknowledged by them all alike, may be of very mixed origin. We may possibly find in it Mosaic ordinances grafted on to Rajput traditions, and modified by Moslem custom. The Afghans, who have called themselves Duranis, ever since the foundation of the Durani empire about a century and a-half ago, say that they trace their descent from the Israelitish tribes through an ancestor named Kish, to whom the prophet Mahomet gave the name Pahtan (which is Syriac for a rudder) because he was to steer his people into the currents of the Moslem creed. We have already noted, however, that the Paktun or Pathán

nationality is very much older than Islam. It is difficult to account for the universal prevalence of Israelitish names amongst Afghans without admitting some early connection with the Israelitish nation. Still more difficult is it to account for certain observances, such for instance as the keeping of the feast of the Passover (which if not intelligently observed by the Yusufzai branch of the Afghan race, is at least curiously well imitated), or for the persistence with which the best educated Afghans maintain this tradition, without admitting some original basis of truth. Bellew thinks that this Israelitish connection may be a real one ; but he points out that one at least of the three great branches of the Afghan family traditionally sprung from Kish, is called by the name Sarabaur, which is but the Pushtu form of the ancient appellation of the solar race of Rajputs, colonies of whom are known to have emigrated into Afghanistan after their defeat by the Chandrabans—the lunar race—in the great contest (or Mahabharat) of early Indian records. So that the Afghan may possibly be an Israelite absorbed into ancient Rajput tribes ; and this has always appeared to me to be the most probable solution of this ethnological problem.

The modern Afghan, at any rate, takes his stand on the grounds of tradition to be one of the chosen race, a descendant of Abraham ; and he only recognises affinity with other Patháns through the medium of a common language, and a common code of tribal custom. His principal habitat is on the south-west of Afghanistan, bordering Persia and Baluchistan. In the vicinity of Kabul, and of the frontier south of the Khaibar, Afghans are much mixed with Ghilzais of Turkish origin, and with Parsiwans, or Persian-speaking tribes of many origins, who predominate in that part of Afghanistan. North of the Khaibar, however, throughout the Mohmand country and the districts of Bajaor, Swat, and Bunér, we find the Afghan again predominating ; again the ruling race.

Our recent campaigning beyond Malakand and Peshawar took us through the heart of this new Afghan province of Roh, the province that has lately been officially disconnected from Afghanistan and removed from Kabul influence by the demarcation of a boundary. The Afghan inhabitants of this new independent province did not understand the meaning of their severance from the Afghans of Afghanistan, and regarded the demarcation of a boundary with much suspicion, not feeling assured that the limitation of the Amir's responsibilities did not mean an increase of our own. In short, they thought that they were to be annexed to India, and this idea being sedulously fostered and encouraged by their mullahs, the result was a sudden explosion of fanatical hostility as unexpected by them as it was by us.

The nature of the connection existing between these different sections of Afghans requires a few words of explanation. The head-quarters and original seat of the Afghans may for present purposes be taken as Kandahar, where Ahmad Shah, the founder of the Durani Empire, was crowned king. From Kandahar the great Durani clan spread to the north-east and gave the Barakzai dynasty to Kabul, which dynasty still survives. From Kandahar, too, another great clan, the

Yusufzai, travelled eastward, and after many wanderings (of which the record is historical) they established themselves in lower Swat and Buner, dispossessing a tribe called Dilazaks about the middle of the fifteenth century. Who these Dilazaks were is not quite certain. Afghans deny that they were Patháns and call them Indians. They may have been Buddhists, although the Buddhist faith, which has left so many remarkable evidences of its existence in Swat and the Peshawar valley, had declined long before we hear of the Dilazaks. Buddhism flourished from 530 B.C. till the days of Skythic occupation of Swat, which succeeded the Bactrian rule in the second century A.D. In the fifth century it is described by a Chinese pilgrim as still the religion of the country, and it was then that its monasteries and stupas, its magnificent buildings, roads, and bridges rendered the fame of the kingdom of Udyana great and glorious from farthest east to the borders of Europe. Two centuries later there is evidence of its decline; and when Mahmud of Ghazni, as the apostle of Islam, burst on Swat in the early years of the eleventh century, his ruthless soldiery so devastated and wasted the land that little was left for Chenghiz Khan the destroyer, and Timur the Tatar, who followed in his footsteps several centuries later, to destroy. For 500 or 600 years after Mahmud's invasion the whole of Swat and of the Peshawar valley was a howling wilderness, the home of the tiger and the rhinoceros which infested the Indus swamps. When Babar (the founder of the great Moghul dynasty in India) came in 1519, he found the Yusufzai in occupation of lower Swat and Buner, and the Dilazaks still a fighting people; for he had to defeat them before he could occupy Bajaor. As we know from other sources that up to the middle of the sixteenth century a large part of Swat was still in the hands of Kafirs, or infidels, and as the Kafirs of Lower Kafiristan to this day claim to have been driven out of Swat, I think it not impossible that we might find remnants of the Dilazaks amongst these interesting, but remarkably mixed, people. However, that may be, all that remains of the Buddhist element of the population are a few uncultured folk to be found here and there (so Major Deane tells me) scattered in groups amongst the wildest and most inaccessible of the Swat hills. The Yusufzai Afghan reigns supreme in Swat, whilst the Laghmáni (an Afghan race of the Laghmán valley) has spread into the Mohmand country and Bajaor.

The Swati as we know claims to be independent—but his independence lacks historical support. At the end of the sixteenth century he was crushed and almost annihilated by one Zain Khan, who was sent by the Government of Kabul to collect taxes. In 1670, again, he was most severely handled by Aurungzebe. In 1738 he gained a temporary success at Ambela against Nadir Shah's forces; but it was very temporary. Nadir Shah appeared in person before Buner, and the Yusufzai collapsed, as he collapsed but a short time ago before Sir Bindon Blood. The Yusufzais paid up revenue to Timur, son of Ahmad Shah, founder of the Durani Empire, after assisting Ahmad himself in the capture of Lahore. They even assisted Shah Zaman, son of Timur, and until they were defeated by the Sikhs at Naoshera (on the same battlefield on which they themselves had

attained the mastery of Peshawar), they acknowledged the Afghan supremacy of Kabul. When we defeated the Sikhs in our turn, they should have admitted our supremacy, but this they never have done, and their national status for the last fifty years may be described as an independence, with a strong bias towards Kabul. It must not be supposed that the Afghan Yusufzai is the only inhabitant of Swat. There is a very large population of the original land-owners mixed with the Afghans, but we have not time to deal with these secondary races who now rank as strangers in the land that their fathers owned. The ruling population is, as I have said, Afghan, but sectarian differences have arisen between the Yusufzai and the Afghan Mohmands, or Mahmandzai, and they have held more or less aloof from each other in consequence. Both tribes, however, look to the Amir of Kabul as their chief spiritual head and temporal adviser.

The Yusufzai are by no means the degenerate race that they have sometimes been represented to be. There are many remarkably fine men amongst them, and they make excellent soldiers. But he is a home-loving individual. He will serve abroad as his forefathers have done, but he ever looks forward to the final return to his native village and his share in the family patrimony. Here he hopes to spend his declining days, making up by extra devotion and attention to religious observances, for the sins and omissions of his youth. This desire to end his days in peace, and to rest finally in the village cemetery, is rather surprising, considering that the system of land tenure in Swat is of a most complicated description, and involves the complete change of ownership after a certain term of years ; that is to say, that the whole population of a village walks out, and a new population walks in. This system is fatal to land improvement, and does much to impoverish the country, and one would have thought that it would have told strongly against that love of home which is so marked a feature in the Yusufzai (and indeed in all Afghan) character. The Yusufzai are a cheerful race, fond of music and much addicted to what we might call amateur theatricals. In these village representations it is said that the British local official does not always figure to advantage. Each Yusufzai clan under its own chief forms an independent commonwealth, and owes no allegiance to others ; so that when not bound together by the ties of common interest, they are rivals, much as the Scottish clans of 300 years ago were rivals on our English border. Raids and counter raids are the excitements which vary the round of religious observances and pilgrimages in times of peace, and these are so much a part of Yusufzai national existence that every village owns its warning drum, which assembles the men together for village defence the instant that scouts bring in warning of attack ; and it is astonishing how soon the whole countryside can be called to arms by this means. A curious instance of rapidity of action, and of the blind way in which they will follow the leadership of any mullah whose lying fanaticism is vigorous enough to rouse them into activity, was evidenced by their remarkable proceedings immediately before the late attack on Malakand. A week or two, even a day or two, before the attack, active hostilities were no more anticipated by the Swatis themselves than by our own

political officers on the frontier. The mullah, as usual, was the motive power. Who instigated the mullah and set him in the field on this crusade we will not stop to inquire. But thus it happened that whilst there was distinctly "unrest" amongst the Swati tribes-people for some months previous to the attack, there was no sign whatever of active aggression until a certain Fakir arose, called the Sartor Fakir or "bareheaded" one. He had travelled far, and seen men and cities. He had been to Baghdad and to Turkestan, had visited the Amir at Kabul, and thence moved on to Buner, where he became custodian of a well-known ziarat or shrine. About the middle of July he set himself to work on the credulity of the Swatis, but he was generally accounted mad, and his assertions that he could feed thousands from a single pot of rice, and turn aside the bullets of the enemy were not generally accepted. On the 26th July, he appeared at Thana, which is the Khan Khel, or ruling village, of the Swat district in which Malakand and Chakdara are situated. Here he had a following of but a few boys. He announced that he was about to turn the Feringhi out of Malakand, but finding it still somewhat difficult to obtain a following, he is said to have actually made a start on Malakand with his half fledged supporters, asserting that if the men of Thana would not help him, the intervention of heavenly hosts would complete the defeat of the enemy; but he pointed out that in the distribution of loot that would certainly follow, the Thana people must be content to stand aside. This was too much for the cupidity of the Swati. About a thousand men joined his standard at once, and the Khan of Thana himself taking a comfortable view of the proceedings from a Tonga which was driven after the rabble, a sudden rush was made—so sudden and so determined, that the political officer (Major Deane) had barely time to issue his warning when the tide broke against Malakand. Once the action commenced, tribes-people flocked in from every quarter, and the fury of their fighting is attested by every officer who witnessed it. General Meiklejohn, who commanded at Malakand, told me that when the cavalry was able to act in the open against these half-armed people, he saw them turn to meet the charge with sticks and stones. We need not think of the Swatis as a degenerate and cowardly race. They fought like the Arab races of the Sudan—like Zulus—like Afridis; and we may be thankful that they were not armed like Afridis.

But we must leave the Swatis and turn to a totally different people. The Afridi is not an Afghan and admits of no connection with the Afghan. He is more probably of Indian extraction, and has accepted the faith of Islam; but he is an indifferent Mahomedan, having adopted any sectarian doctrine that suits his views. He lives in a country that differs in most important geographical features from the land of the Swati. No high road to India runs through his domains. His head-quarters at Maidan are a sort of *cul de sac*, possessing no strategic importance whatever; but he believes in his country and he loves it as a terrestrial Paradise. Like the Swati he boasts of an unconquered independence, and with much more reason; for his ancestral highlands, dovetailed geographically between the Khaibar and the Kuram are so inaccessible, and so

well adapted to defensive tactics, that they have been prudently left alone by successive Kabul rulers, who saw nothing to be gained by the troublesome conquest of a country which leads nowhere, whilst they were in easy possession of all the surrounding districts. The independence of the Afridi has been the independence of a bee's nest in the midst of cultivation, and he has been so long undisturbed that like the Yusufzai of Buner, he had come to the conclusion that a special providence would always intervene to turn aside the invader. He has, at any rate, taken his own measures to turn aside the explorer; for until the late campaign in Tirah, no efforts to bring those interesting highlands within the pale of border topographical mapping has ever been successful.

The Afridi is said to owe his present laxity in religious discipline to an Afghan adventurer named Bazid, who, finding his heresies repudiated by the Yusufzais in the middle of the sixteenth century, betook himself to Tirah; and there discovered a people whom they exactly suited. It is worth noting that the Chamkanni tribe, who live on the western borders of Tirah, are supposed to be degenerate Afghans who have fallen away from the true faith, and are now classed as infidels and heretics by Duranis and Yusufzais alike. Politically the Afridi no more interests himself in the Swati than he does in the Laplander or Esquimaux, and yet it would be incorrect to say that the Swat rising had no disturbing influence in Tirah. Any rising on the border has a disturbing influence throughout the adjoining districts; and Saiad Akbar, the prophetic Mullah of Tirah, probably used precisely the same arguments as an incentive to active hostilities that the mad fakir in the first instance, and the Hada mullah, in the second, had preached on the hills in Swat and Mohmand. Fortunately for us the Afridis were comparatively slow in responding. Their government is perhaps the most decentralized government in the world, and its machinery works spasmodically. They have neither a well recognised head of the whole tribe, nor a single village which could boast of being a capital town either for purposes of trade or government. On the top of an ill-constructed shed in Bâgh (which is geographically about the centre of the great Maidan plain) their councils are wont to meet, and intertribal affairs are discussed with much acrimony, and no little danger to the county representatives. A useful assistance to parliamentary argument is said sometimes to be found in their weapons, one of which was triumphantly pointed out to our officers. It was an antiquated old pistol with a deadly power of scattering slugs and other missiles with impartial effect at short distances; and it was said to be a most useful support in jirgah controversy.

I have said that there is no recognised head of the great Afridi tribe; I might almost say there is no recognised head even to the section, or clan, of that tribe. Every chief of a family is practically a law unto himself and to his family, if he is only strong enough to hold his own. Blood feuds and murderous reprisals, carried out in deadly vengeance for a breach of the Afridi code of honour (which is real enough, although crude and crooked) may be called common domestic incidents, and this leads to a curious absence of that amalgamation for

purposes of self-protection, which is indicated by walled and fortified villages such as are common elsewhere on the frontier. Division of authority also leads to peculiar difficulties in the matter of our political relations with these people. I believe that one single clan (the Zakka Khel) were represented in the final jirgah at Peshawar by about seventy chiefs. Although the various clans, Malikdin Khel, Kambar Khel, Zakka Khel, etc., will combine against a common invader, they live under ordinary circumstances in a state of deadly animosity in their own country, and under quite different conditions of social existence. For instance, we have so many Malikdin Khel and Kambar Khel in the ranks of our native regiments, as to lead to a suspicion that nearly every fighting man in those clans must have passed through our ranks. The Zakkas, on the other hand, send us but few recruits. They are the great salt traders of the community, and the advantage that they possess in holding lands which stretch from the centre of Tirah to the plains of Peshawar on the one side, and to the passes into Afghanistan on the other, gives them a peculiar advantage in commercial pursuits.

With all his hereditary instinct towards treachery and cruelty, we must admit that the Afriди has shown himself to be a right good soldier in the field, and he is frequently in himself a right good fellow in private life. His open-mindedness towards his hereditary enemy is as marked as is his occasional vindictiveness towards his fellow clansman. Family ties are nothing to him if they clash with that code of morality which requires him to be true to his salt. I have heard of an Afriди sepoy who, when urged to pick off the leader of a band of frontier raiders with his rifle, certainly exhibited a good deal of bad marksmanship; but he left it to the end of the fight to explain that the leader whom he was requested to shoot (and whom he so often missed) was his own father. But I really do not believe that they would all of them be so particular.

When arrayed against us the Afriди has shown himself to be as brave a soldier, as he is a capable marksman. His great natural intelligence has not only taught him how to use his rifle, but how to combine under able leadership. And latterly, he has learnt some of the lessons taught by civilized warfare. It was only towards the end of the campaign that we found out (too late unfortunately to save us from much loss for want of this knowledge) that our wounded would be cared for, and our dead respected. This is a great advance in the ethics of savage frontier war; and goes very far to make up for the difficulty we have experienced (and may yet again experience) in meeting well-trained soldiers in a field entirely suited to their tactics, armed with the best of modern weapons.

And we may note that the Afriди is still well armed in spite of our efforts to disarm him. With all the astuteness of the canny Scotch clansmen of three centuries ago, he has been able to retain all his best weapons whilst making up the tale of arms to be surrendered at the conclusion of the late campaign. An old friend of mine who is almost as well acquainted with the highlander of our Indian frontier as with his own Scottish tribes-people, recently unearthed at

Montrose some quaint records of English frontier fighting of the past; and he found that the necessity for delivering up arms formerly led to quite a brisk trade between Scotland and the Continent. Cheap weapons were imported in large quantities for delivery to the English generals.

And now, whilst apologising for myself as a most inefficient anthropologist (for I have not even a rudimentary acquaintance with that science) I may perhaps be permitted to advocate the absolute necessity for a careful study of the people with whom we have to deal, of their idiosyncrasies, and especially of their history, as an assistance in reaching right conclusions as regards our future relations with them. It seems to me that if you study the history of Afghanistan and its most unstable government propped up from its earliest infancy by external assistance from India; if you read rightly the story of our own advance from the stage of commercial pioneers to that of Empire in India, and note the struggles of the East India Company against the greatness thrust upon it of territorial possession and political sovereignty, you will require no political prophet to guide your conclusions to an issue. Policy is, after all, only a retarding or a progressive agency in those great movements which attend the development of nations; and it can never lighten the burden of England's responsibility as the greatest civilizing agent that the world has ever seen.

THE ARAB TRIBES OF OUR INDIAN FRONTIER.

BY COLONEL SIR THOS. H. HOLDICH, K.C.I.E., C.B.

THE long extended north-west frontier of India presents so many ethnographical problems of the highest interest for scientific study that I need hardly apologise for introducing a part of it to your notice this evening—a part which is very little known, and has but lately fallen within the pale of geographical survey. It is not so very long ago that the passenger by the North-Western Railway from Karachi to Multan could look westward and, for a great part of his journey, see absolutely to the utmost limit of our frontier mapping. A blank high wall of impassable hills marked the line where the plains of Sind came to an end, and beyond the face of those hills all was lost in conjecture. It is this borderland of Baluchistan, including the maritime province of Makrán, which stretches westward from India to the Persian Gulf, with which we have to deal at present, and which offers so many ethnographical problems for solution as to have filled the souls of explorers with despair. In the course of surveying the country we have learned something of the ethnographic characteristics of the country generally, and we have had opportunity for verifying the conclusions expressed by those few scientific observers who have paid any attention to this wilderness previously; but surveyors are not anthropologists, and their time for inquiry in this particular branch of science is short. If therefore I express the views that I have adopted from such cursory examination as I have been able to make, you will understand that it is quite as much with the object of gaining information, as of giving it, that I venture to address you.

Geographically this is a most important corner of Asia. It lies between Persia and India; the high roads from the west to the promised land of the east run through it, either passing up its narrow valleys to Kalat and Quetta, or following a more southerly coast route to the Indus delta. Sistan, once "the granary of Asia," lies on the north-west of Makrán; Persia is to the west, and India to the east. On the south is the Arabian Sea, and on the north a desolate expanse of sandy desert which fills up the map between Makrán and the great Helmund river. Through Makrán a ceaseless tide of human emigration has set from the very earliest periods of which there is traditional record, and it would certainly appear that this tide has ever set eastward. We know that Alexander struggled through from east to west, but his was a military expedition, not a national movement. And there have been certain reflex waves from India which have left their flotsam stranded in the Makrán hills, but whether historically or traditionally, all the great tides which have swept through the country, tides from

Syria, from Mesopotamia, from Persia, from Arabia, have passed from west to east, and, historically, have all been directly connected with the command of the eastern seas.

Small wonder then that we find in Southern Baluchistan a most extraordinary conglomeration of mixed Asiatic nationalities. Medes and Persians, ancient Chaldeans, Arabs, Turks, Monguls, Skyths, Rajputs and aborigines; even Sikhs and Ethiopians have left their mark on Makrán, and the lost threads of many an ancient history or national tradition might be picked up here, were scientific anthropologists to turn their attention to the country. All this part of Baluchistan separating India from the Persian province of Khorasan is a difficult and dangerous country to pass through. It is for the most part a wilderness of hills, of jagged, barren, dry, and unprofitable hills, but intersected by valleys which here and there are not only fertile, but exceedingly beautiful. Taking them as a whole these narrow intersecting valleys run east and west, and afford an excellent highway to those who know how to approach them at either end. Alexander did not know how to make use of these natural highways of the country, and was soon hopelessly entangled in the maze of difficult and rough hill country which surrounds them. The Arabs did know how to use them, and for centuries maintained a great trade high-road right through Makrán to India. Not only so, they possessed great cities and a cultured and wealthy population of merchants in them, who were renowned through the world for their probity and fair dealing. And yet it is difficult to conceive that, were it not for the value of the coast and its harbours and of the rights and properties of that great trade highway, even those wonderful people, the pre-Mahomedan Arabs, would have cared much for the occupation of that sun-dried wilderness. It is true that the climate may have been different in the early centuries of our era to what it is now. Now, but for a few months of respite in the winter, the ceaseless blaze of furnace heat is such, that in parts of Makrán even flies find the burden of life intolerable, and the sun-cracked earth refuses the boon of water, except at far distant intervals. The S.W. monsoon hardly touches Makrán, which partakes much more of the climate of Eastern Persia than of that of Western India. Yet this is the country which so teems with the evidences of occupation by so many successive waves of oriental humanity, that I hardly know which section of it is most important or most interesting. It may perhaps be best to sketch generally what we actually find there, and leave scientific deductions to more advanced students of anthropological science; for the science of ethnography and of anthropology is yet in its infancy in India. With easier means of communication, and the advance of direct and intimate relations between England and India which will arise therefrom, we shall no doubt find European scientists selecting a field for research which is left at present to the leisure opportunities of hard-worked Indian officials.

The very earliest occupants of this geographical link between Persia and India of whom we read anywhere, appear to be those hairy, fish-eating savages whom the Greeks encountered near Tomeros (which I have identified with the modern Hingol

river delta) who lived in huts built of fish-bones, used their long nails as fish knives, and fought with wooden pikes hardened in the fire. There is nothing apocryphal about this description. A people of that sort must have been there in primæval times, and evidences of their existence in the jungles of Western India until quite recently are not wanting. They have, however, long since disappeared from regions where there were no forests to shelter them, and they gave place in Makrán to a race of builders, erecters of stone dwellings that are found in immense numbers clustered on the sides of certain hills, and which have long been a puzzle to local investigators. Colonel Mockler, who was for some time politically employed on the Makrán coast, has gone farthest of anyone in unravelling the mystery which surrounds them. These buildings are constructed of slabs of limestone which abounds in Southern Baluchistan, in the form of small rectangular constructions (the slope of a hill sometimes forming one side) with doors facing westwards. They are locally known as Damb, and the hills on which they cluster are called Damba Koh. No one yet has successfully unravelled the riddle of the Damba Koh, although several theories have been advanced. I should not be surprised if they are eventually traced to a connection with other buildings, intermixed with strange stone circles, which are found along the western highlands of India stretching down through north and south Arcot, and which are now credited to the Pandomanagai—the race of little people—the pygmies of India, communities of whom are still to be found in the south. If so, this is the earliest record of that gradual and ceaseless migration southwards which has resulted in filling up the ethnographic reservoirs of Southern India with innumerable Dravidian tribes.

But as far as Southern Baluchistan is concerned the pygmies (if ever they were there) have long since disappeared. Gone, too, are many of those Dravidian peoples who once made Makrán all their own; including those who followed the Mesopotamian custom of burying their dead in pots, as well as some of those who opposed Alexander's advance. They may have joined the great army of lost tribes, or they may still be represented (as I believe them generally to be) amongst the Dravidian people of Central and Southern India; but their place in Makrán knows them no more. But if some have disappeared, many have remained, and we can to this day identify most of the tribes mentioned by Herodotus as occupying the 17th Satrapy of the Persian Empire, or by Arrian as joining in the extermination of the Greek army. It is more than probable that the great Brahui tribe (the only one that has made solid headway against the Arabs) who occupy all Sarawán and Jalawán, the east and west highlands of Kalat stretching down the frontier southwards from Quetta, is Dravidian, mixed no doubt with non-Dravidian elements, amongst which there is an affiliated Mongul people who form a very strong and important section of this borderland community. It is only quite lately that it has been possible to survey the wild wilderness of rugged highland territory that is occupied by the Mingal or Mongul clans. It should be noted that the name Brahui (or

Bar Rohi) carries with it the same signification as Rohilla, or Kohistani, or as the Parikanoi of the Greeks, or the Accad of ancient Mesopotamia. It means simply "mountaineer."

From the neighbourhood of Kalat southwards towards Karachi there is an exceedingly rough tract of the Sind border. Here, in the narrow and constricted valleys which intersect the rugged and pathless maze of the frontier barrier of mountains (a barrier which is nowhere open to practicable routes and which is one of the roughest and toughest areas ever brought under survey), we find nothing but Brahuis and Mingals. In the extreme south the little triangular province of Las Bela is peopled by Rajputs, one of those reflex waves from India of which I have spoken. It is a comparatively recent wave. West of the Dravidian area we find a colony of pure Persian extraction—the Naoshirwanis. They also are said to be comparatively recent arrivals in the land. They are at any rate a finer race of Persians than any I have met with in Eastern Persia, and many notable border warriors have been numbered amongst the Naoshirwani chiefs of Kharán.

Beyond these again, throughout Southern Baluchistan and Makrán, are tribes innumerable, many of which were known in the days of Herodotus, and some of which have figured as the ruling people of their time—chief amongst the great confederation of tribes. Amongst such are the Boledi, spoken of by Ptolemy, who are still locally recognised as a survival in the seats of the mighty, though they have long been dispossessed of their country by a people of Sikh extraction called Gichki. Their ancient royalty is now represented by one old lady whose name is Miriam, and who is exceedingly cunning in needlework. Speaking in most general terms, it may be said of Southern Baluchistan that lowest in the scale of all these tribal communities and subdivisions are those people of ancient Persian stock who spread all through Southern Asia in the days when Southern Asia was all Persian. These Tajaks are the tillers of the soil, the slaves and husbandmen, hewers of wood and drawers of water throughout the land, and may often be recognised by their tribal designations, though they usually claim affinity with some tribe higher than themselves in the social scale. Overlying and overspreading this once dominant Persian brotherhood are those Semitic (Arab) races, who of all the conglomeration of this mixed Baluch community are the most interesting and the most worthy of careful study. For the story of the Arab occupation, first of Sistan, then of Makrán, and finally (having command of the sea), of all Western India, cannot fail to be interesting to us from many points of view.

The complete history of that magnificent instrument of civilisation, the Arab nation, has yet to be written, but it has always appeared to me that in the construction of such outlines of it as we possess, the limits of space which are drawn round the story, whether of time or of locality, are far too narrow. We are accustomed to think of the Arabs as a great conquering people who commenced their national career by carrying the banners of Islam through the world, and stamping their faith on its great civilised communities. But if by Arabs, we mean the inhabitants of Arabia, history and tradition alike fail

us in unravelling the first beginnings of their civilising mission in the world. History teaches us that they were a great fighting people. Tradition informs us that they were a great mercantile people, long before they took to the sword.

Who were those people who came up from the sea and taught the Turanian inhabitants of Mesopotamia to build temples to the planets and to cast aside their demonology? Who were they who carried the first rudiments of the science of navigation from the Eastern seas to the Mediterranean; whose ships left no known shores unvisited in the gradual development of western commerce? Phoenicians you will say—but who were the Phoenicians? If we are to trust to what we are now told about them, they started for the Mediterranean from the Bahrein islands (where their tombs now stand) the ancient names of which, we are told, are Tyros and Sidodona, and they were a well developed race of builders and traders even when they left their original home on the Arabian coast. In the early centuries of our era they were as completely masters of the eastern seas as we are now. Wherever they spread in search of trade, through Africa, or Western Europe, or Eastern Asia, there they carried the science of building, irrigation, and road making with them, and there they established trade centres and colonies.

Our own first beginnings in the science of ocean navigation were borrowed from the Arabs. Our first great sailing ships were modelled on the Arab "buggalow" or "dhow." Their science has stood still whilst we have progressed till we have arrived at an "Oceanic" and a "Majestic." Our naval terms are Arabic. What else is "admiral," or the names of our smaller craft, "barge," "dinghy," and the apparently good old English word "jolly-boat"? The corresponding boat in Arabic is "jalaba," and as the other names are clearly Arabic I do not see why that should not be. So that we need not be surprised if there are evidences of Arab influences, and probably of Arab occupation, in Africa and India, and on the Persian and Makrân coasts, long before the days of Islam. It is true that they did not actually occupy Sistan and Makrân till after the downfall of the Persian monarchy; but they possessed widespread settlements there long before the invasion of India by Mahomed Kassim in 705 A.D. It was their occupation of Makrân, combined with the command of the sea, that so signally assisted the progress, not only of that most successful invasion, but of a simultaneous expedition for the conquest of China. Sistan, Makrân, and Southern Baluchistan, as well as Sind, are all full of their records in brick and stone. In Sistan there are to be found the remains of cities of brick-built houses, and tombs which are of the structure of those which now stand in the cities of Southern Arabia. In Baluchistan and Makrân there are thousands of relics of splendidly constructed "bunds" or dams to form water reservoirs for irrigation purposes where water is scarce. I need not tell you of the remains of the great mediæval cities which formed a line through Makrân to India almost from end to end; of the groups of decorated tombs sacred to the memory of the Khalmat chiefs; of

the stone sepulchres of the kings at Tatta, in Sind. All these things are written of elsewhere. The point on which I wish to insist is that the Arabs are on the frontier still. Ask any Baluchi whom you may meet, and he will almost certainly say that he is an Arab of the prophet's own tribe, and that his tribe came from Aleppo.

It is possible that there are few *pure* Arabs in the border country. We know that in the time of the great Arab invasion of India through Makrân the Arab troops, who were mostly drawn from Syria, never saw their country again, and they brought no women with them. It is probable therefore that there was originally much admixture in the ranks of the Baluch tribes of Arab extraction, just as there is in the Tajak tribes of quasi Persian extraction, and it is not improbable that more of the mixed races have stayed to make this their country than of the pure bred Arabs who must have come over in thousands during the centuries in which they held the dominant power in the Indus valley. However that may be, it is certain that the Arab tongue has disappeared from the Indus valley as completely as it has from Makrân, and that the language of all tribes alike is now that archaic form of Persian which we call Baluchi.

According to Sir H. Elliot (who quotes Ferishta), the Arabs never really colonized Sind, and their occupation of the Indus valley terminated with Al Kadir in 1031. Yet they occupied Makrân, and a great part of the Persian coast, long after the last of the Kalifs had been starved in his treasury at Bagdad, for we have the evidence of Marco Polo in 1290 that "the most part of the people in Kez Macoran are Saracens. They live by merchandise and industry, for they are professed traders and carry on much traffic by sea and land."

The most prominent of the Arab tribes are now included in the great Confederation of Rinds. Rinds are to be found under that designation in two groups, one to the north-east of Kalat, which includes the Marris, Bugtis, Bozdars, etc., and one in Makrân massed about the lower Kej valley near Mand. These latter are usually known as the Rinds of Mand. But the desert bred Rekis, the Sinjaranis of the Helmund, and many other tribes all call themselves Rind, and all subscribe to the same old tradition that their progenitors were Khoreish Arabs who were driven from Syria by the persecution of the Kaliph Yejid at the end of the seventh century. But there have been tribes in Sind in comparatively recent times who claim direct connection with Arabia. Such were the Khalmatis who are traditionally supposed to come from Oman, who took their name from Khalmat on the Makrân coast, where they settled ere they finally migrated to Sind, and became a powerful and dominant people in the lower Indus valley and the plains of Las Bela.

It is long since every vestige of the mediæval Arab cities of Makrân and Béla has disappeared, so far as buildings are concerned, but the tombs of the Khalmats are still there, grouped in clusters on rising ground, overlooking the rivers and plains, wherever a fairer prospect than usual greets the eye, and commends itself to a sense of natural beauty. There are many of them within reach of Karachi,

and in simplicity of design and construction, allied to an equally simple grace of geometric ornamentation, I know of nothing to equal them elsewhere. I believe the Khalmatis have disappeared altogether, but of this I am not quite certain. The carvings on these tombs are as fresh and clean cut as if they had been fashioned yesterday, but in that exceptionally dry climate they may be many centuries old all the same. To put it broadly, all the best of the Baluchis are Arabs by descent, and the best of the Baluchis are the best of our frontier tribesmen. We do not see many of them in our ranks as sepoys. They do not care about the discipline of regular service, and our so-called Baluch regiments, like some of our so-called Highland regiments, are not distinguished for the number of recruits who answer exactly to the regimental designation. But as border robbers and raiders, as light horsemen of the heroic type, they have probably been unequalled since the days of the Parthians.

The true Baluch chief is a gentleman by nature and heredity, a gentleman such as one may meet in Arabia, self-possessed, courteous, free, yet graceful in his bearing, an accomplished horseman, a man of the world, who is not to be disconcerted by such trifles as a want of linguistic knowledge or the surroundings of civilised existence to which he is unaccustomed. I have seen an Arab chief sit down to breakfast in a company of officers on board ship. He "came from the country," and had probably never seen a knife and fork before. Possibly he had never sat in a chair. Certainly he did not know a word of English, nor his entertainers a word of Arabic, yet he retained not only his dignity but his ease, and in half-an-hour he was complete master of the situation. There is much of this *savoir faire* in the Baluch, who is as distinct from the Pathán who jostles him on the frontier border as a Circassian chief is from a Levantine.

I have often been asked why it is that our control of the southern borderland is so much more effective than that of the north. It is very much due to our strategical position there. We are not merely *facing* the Baluch independent tribes; we are at the back of them, and their country is more easily approached from the back. Quetta is not merely a block in the way of an advance into India; it is the metropolis of Baluchistan, occupying a central dominant position from the control of which there is no escape. But there is also to be considered the difference in the national characteristics of the two races. Both are subject to tribal organisation, but the Pathán is individually more independent, acknowledging no authority but the tribal jirgah, and surrendering his freedom of action only at the voice of the mullah. The head of every Pathán household considers himself a chief in his own right, as good as any other chief in his clan. The Baluch, on the other hand, is loyal and true to the acknowledged head of his tribe, and as much of a patriot as any highlander of the Scottish border. This much simplifies the political dealings of government with him. His method, too, of meeting an enemy in the field is different from that of the Pathán. When a Baluch warrior goes into action he goes to stay. He will picket his mare under the nearest tree, and rush into the thick of the fray with sword and shield, scorning to take

advantage of cover, fighting with the traditional courage of the Arab in the open field, whether that field is in the valleys of Baluchistan, or in the Sudán. And the result is the same in either case.

We all know what happened at Omdurman; but perhaps few followed the course of the brilliant little campaign lately conducted by Col. Mayne in the far rougher field of Makrán. The Baluchis thought to overwhelm his little force in the open, just as the Khalifa thought to overwhelm Kitchener. And when that notorious old freebooter and robber, well named Baluch Khan, found that individual courage was of no avail against better discipline and better arms, he put himself at the head of a gallant remnant of his force and went straight for the guns. He died like an Arab.

I need not refer to the very different tactics adopted by the Afridi, who does not lack courage either, but much prefers stout cover and a long range rifle whether engaged in a national fight or a private vendetta. He will only fight like a Sikh or an Arab when he finds there is no other way of fighting.

The varied characteristics of the two races are well summed up by Oliver in his charming book, *Across the Border*. The Baluch, he says, is "essentially a nomad, good-looking, frank, with well cut features, black and well oiled flowing hair and beard, attired in a smock frock that is theoretically white, but never is washed save on the rare occasions when he goes to a durbar; and he is a general favourite. He is a bit of a buck, and when he finds himself passing into the sere and yellow he dyes his hair. It is not uncommon to find an old gentleman with eyebrows of deep black, and the tip of his beard gradually shading off through purple to red, to roots of pure white. His wife makes quite a toilet, and arranges her hair in many effective plaits, but any connection with soap and water would be voted by either as a mark of the worst effeminacy. He shares with the Pathán many of the virtues and vices peculiar to a wild and semi-civilised people, but in many respects he presents the most agreeable contrast. Both are given to hospitality, both ready to exact an eye for an eye, a life for a life, but the Baluch prefers to kill his enemy from the front and the Pathán from behind." To both "Allah is great and Mahomed is his prophet," but the Pathán is often a dangerous fanatic whilst the Baluch is perfectly willing to have his prayers said for him. As Ibbetson pithily puts it—"he has less of God in his head and less of the devil in his nature." There is a story of a Baluch who, asked why he did not keep the feast of the Ramzan, replied that he was excused, as his chief was keeping it for him. "What are you doing?" said another to a pious Mahomedan who was saying his prayers in the plains. "Praying in the fear of God," said the plainsman. "Come along to my hills," rejoined the Baluch, "where we don't fear anybody." Both have but dim perceptions of the difference between *meum* and *tuum*, preferring "the good old rule, the simple plan, that he should take who has the power, and he should keep who can."

The love of a Baluch for his horse has passed into a proverb all over the world. This again is an Arab instinct. If a Baluch cannot own a whole horse he will

become the proprietor of one leg or more, as the case may be, and claims an equivalent share in the use of the animal. Baluchis still prefer mares for their long rides over rough hills, although the original reason for this choice (the fact that mares are less inclined to lift up their voices and scream to their companions when it is desirable to preserve strict silence) has passed away with their opportunities for raiding; but I understand that this prejudice is fast disappearing. An Afghan would consider it beneath his dignity to ride a mare at all. His prejudices are in favour of the other sex.

Taking him for all in all our frontier Arab has much to recommend him. I have sat in durbar with Sir Robert Sandeman and watched with admiration the magnificent forms of the Mari and Bugti chiefs clothed in clean white, bearing themselves as princes in the land; and the contrast with the gaily clad and much bejewelled Brahui royalties of Kalat has been almost too striking. Courage and loyalty are what one would naturally expect in such splendid human setting—and courage and loyalty is exactly what Sandeman found, and what he, of all men, knew best how to appreciate.

DISCUSSION.

Dr. JOHN BEDDOE.—I should like to make a few remarks, from the point of view of a physical anthropologist, on the paper of the evening. It is interesting to learn that the author can give plentiful historical grounds for the presence of Arabs in Baluchistan, and that he finds in the moral character of some at least of the Baluchis indications of an Arab leaven. But I should much like to know whether he thinks that the physical aspect of these people is at all suggestive of Arab or Semitic descent. Their language, we know, is a Persian dialect, *i.e.*, it is Aryan, not Semitic. I am not one of those who attach very great importance to language as an evidence of blood and descent; but it does afford some *prima facie* evidence. Now the Arab settlers in Makrân had certain advantages which might have availed to enable even a minority to perpetuate their language. They were conquerors and rulers; and their tongue was that of a proselytizing religion. With this last advantage, even a subject minority may succeed in imposing its language on its rulers; this the Slavs did on the Bulgarians, though, to judge from the physical type, the Bulgarian or Ugrian element was the more numerous. But the Arabs in Makrân failed. I suspect, therefore, that there is not much Arab blood there. The few photographs I have seen from Baluchistan have not given me the impression of belonging to Semites. They were those of soldiers, and the author tells us that the Kirds do not often enlist. If he could procure a few photographs of Kirds, or pure Baluchis, and of Brahuis, I think they would have considerable interest.

Mr. J. KENNEDY remarked that Sir T. Holdich's knowledge of Makrân is so extensive that any theory he may express with regard to the origin of the Baluchis will necessarily carry weight. Moreover, he is not alone in his belief that the Baluchi tribes have a large proportion of Arab blood. That theory appears to be mainly based in part upon the traditions of the clans, and in part upon physical resemblances. But I am not sure that it is borne out by history; and before

attacking an ethnological problem, it is always well to clear the ground if possible by a historical review. Now the general outlines of the ancient and mediæval history of Makrân are perfectly clear, however obscure the details. There are three distinct stages. The earliest stage is one of utter savagery. Nearchus found the coast inhabited by the Ichthyophagi, a race of men who lived on fish, built their houses of fish-bones, had little corn, few sheep or goats, and scooped shallow wells in the shingle for fresh water. The inland tribes knew something of agriculture, but lived chiefly on dates, used poisoned arrows, and fortified their villages. Commerce between India and Persia by way of Makrân appears to have been utterly unknown. Alexander the Great had local guides, and was accompanied by a number of the aborigines; but he completely lost his way, and took 60 days to cross the desert—a thing which could not have happened if caravan routes had been in existence. Nor does there appear to have been any commerce down to the first century B.C.; for finds of Græco-Bactrian coins in Makrân are extremely rare.

The advent of the Indo-Scythians in the first century B.C. marks the next stage in the history of the country, and the introduction of a higher civilisation. These Indo-Scythians are known as Sakas. They gave their name to Sakastene or Sejistān, and occupied the whole of Makrân and Sindh, forming a multitude of petty clans and kingdoms which were occasionally united under a single over-lord. These Sakas are supposed to have been of the same stock as the Parthians. Their names, Azes, Vonones, Spalirises, Pacores, etc., are similar to or identical with the Parthian; their head-dress is similar; their coin-types alike; and they use Pehlvi for their inscriptions. The Arsacid kings cultivated their friendship, and often obtained their assistance. The Sakas, on the other hand, must be carefully distinguished from the other great Indo-Scythic horde—the confederacy of the Yue-chi, in which the Kushāns were supreme. The Kushāns expelled the Sakas from Afghanistan and the Northern Punjab; and the ancestral enmity of Afghans and Baluchis was anticipated by the feuds of these Indo-Scythians nineteen centuries ago.

The Sakas were the first to open up regular communications between India and Persia by way of Mekran, and more than one Sasanian monarch, Parvez the last among them, invaded India by this route. When the Arabs turned their attention to the conquest of India, their armies merely repeated what Persian armies had done before; and they had little difficulty in overrunning the country. But the country was uninviting; "water was scarce, the fruits were poor, and the robbers bold." The Arabs pressed forward to the conquest of Sindh—a much more difficult and protracted task. Arab chiefs of the purest blood led the invaders, and Hajjaj on one occasion despatched 6,000 Syrians from Aleppo. But the great mass of the invaders settled in Sindh. Mansura and half a dozen other great towns were founded by Arabs, while the bulk of the Syrians settled in Al Mahfuzah. On the other hand, we do not read of any Arab settlements in Makrân or its neighbourhood, except at Kandahar. The difference is strikingly brought out by Ibu Haukal, who remarks that Arabic and Sindhan were spoken in Sindh, while in Makrân they used Persian and Mekranik. It is clear, I think, that while the Arab conquest made a profound impression upon Sindh, its effect on Makrân was comparatively slight. These facts have a considerable bearing on the origin of the

Baluchis. They are admittedly not aborigines like the Brahuis. The presumption, therefore, is that they are connected either with the Sakas or the Arabs. Their political constitution and their speech—a form of ancient Persian—connect them with the former. Moreover, if we do not regard them as representatives of the Sakas, the Sakas must have disappeared. The early Arab writers talk of Turks or Turcomans, by whom apparently Sakas are meant; and some modern travellers discover a resemblance between the Turcoman and the Baluchi clansman. The Arab settlements in Makrân were not extensive, nor was the country inviting. It is very probable that the Baluchi chiefs have a considerable amount of Arab blood in their veins, and they may often bear a striking resemblance to the Bedawin, although their traditions point to Syria. But how far can we judge of the clan by the chiefs? It seems to me more probable that the rank and file have preserved an unmixed strain, and it is among them that we must seek the solution of the problem.

Mr. W. CROOKE in the main agreed with the conclusions of Mr. J. Kennedy as to the origin of the Biluchis. He remarked that there can be little doubt that their name is of Sanskrit origin—a corruption of the term Mlechhha, applied to outcasts or offenders against Aryan customs. A small outlying colony of the tribe is found in the Muzaffarnagar district of the North-western Provinces, where they have an evil reputation as cattle thieves and swindlers. They are a turbulent, ill-conditioned class, who give much trouble to our police.

ORDINARY MEETING.

MARCH 14TH, 1899.

C. H. READ, Esq., F.S.A., *President, in the Chair.*

The Minutes of the last Meeting were read and signed.

The election of three Fellows was announced, viz.:—J. D. PAUL, Esq., F. L. GRIFFITH, Esq., and Mrs. M. A. HOBSON.

The PRESIDENT introduced Mr. FITZGERALD MARRIOTT, who proceeded to read his paper on “Secret Tribal Societies in West Africa.”

This was replied to by the COUNT DE CARDI, who questioned some of Mr. Marriott’s views; and a discussion was carried on by Miss KINGSLEY, Mr. T. J. ALDRIDGE, Sir JOHN SMALMAN SMITH, and Mr. J. M. HARRIS.

Mr. MARRIOTT briefly replied, and the PRESIDENT congratulated the Meeting on having heard such a carefully prepared paper and such an instructive discussion.

A vote of thanks was passed to Mr. Marriott.

THE SECRET SOCIETIES OF WEST AFRICA.

By H. P. FITZGERALD MARRIOTT.

[*Abstract.*]

MOST of the so-called secret societies of West Africa are tribal and with them are bound up the traditions and customs of the people, so that their total extinction would be almost impossible, though modification appears in some cases to be desirable. They are in their origin merely developments of the tribe to which they belong.

Apart from the law-giving and mystically religious societies, there are two others which are not exactly tribal—one of which is the temporary or Poro association of Sierra Leone. The other comprises the murder or Leopard and Alligator Societies—which extend from Sierra Leone to the Niger, and possibly farther, and are found in many parts of West Africa. They are much feared and detested by respectable natives. The religious Poro Societies of Sierra Leone have been discussed in works by C. W. Heckethorn and the Poro and many others by Rev. J. A. Abayomi Cole.

The societies of the Gold Coast are harmless, secret religious fraternities and tribal institutions. Katahwiri (for men) in which the ceremony of clothing at a certain age plays an important part. It includes circumcision (*keteofo*) and the teaching of mystic folklore and dancing. Katahwiriba is a similar society for women. Nanám, "our ancestors," is another men's society, more mystic and kept more secret than the Katahwiri.

In the Niger territory the partly religious societies are known as Egbo or Igbo, deriving their title from the country of that name, of which the original meaning is "tiger" or "leopard," implying that this part of the country was once infested by these animals, or it may refer to a family whose name was derived from that animal. The most important Egbo Society is that of Old Kalabar, where the native government is founded on it and the king and chiefs are members. Its head is the Abaw-Efik, a sort of high priest who receives his authority from the Egbo chiefs, and while he retains it no one is safe from his power unless he can pay him well. There are eleven grades, the entrance fee of which varies from seventy-five iron bars to four hundred brass rods. Miss Kingsley in a note informs the writer that "the Abaw-Efik is keeper of the 'Ndém Efik (the great (I)dém of Kalabar); but in the execution of his office he is subjected to so many restrictions, the violation of which the 'Ndém Efik punishes with death, that his office is not desired and is frequently vacant."

At Old Kalabar, on "Brass" Egbo day, a yellow flag is raised on the king's

house, and none but the privileged are allowed to walk abroad. A piece of yellow cotton nailed on any one's door implies the protection of "Brass" Egbo. When a man meets the 'Ndém of a higher grade of Egbo than that to which he belongs, he limps by humbly as if the sight had deprived him of strength. Every ninth day during an Egbo meeting, a man goes about the town disguised as a spirit, with leave to flog anyone he meets who is of a lower grade or who does not belong to the society. This is the 'Ndém who carries in his left hand a bunch of green leaves and in his right a great cow-hide whip. He wears a black vizard and his whole body is covered with bamboo matting. He always has a bell fastened to his side to announce his arrival. A chief with a similar bell is depicted in one of the Benin plaques.¹ In New Kalabar the Juju King is held in higher reverence than the Civil Chieftain.

Among the Ibibeo tribe we find various societies. The Uluga, "pig's nose," watch farms, act as councillors in palavers, execute people sentenced to death by impalement at cross-roads. If a wife runs away from her husband the society will restore her, and if she dares to abscond again her parents' house will be sacked or destroyed. They kill with a stone anyone caught stealing yams. They sacrifice animals over bodies of dead chieftains and bury chief and slaves with him. They do not permit girls to wear clothes till they are pregnant and have gone to live with their husbands.

The Ayaka summons the society to meet in the bush, when all who are not members have to close their houses and put out their fires. They have a form of trial by ordeal. Five women are brought from different villages to a king's house. Sasswood and the salamander lizard are beaten up with a little water in a mortar. The priest first drinks from the ordeal cup and then passes it to the accused, who all drink. They are then shut up, those who are innocent vomit; the guilty die and their bodies are cast into the bush. They protect children of dead witches and collect the debts of their parents by intimidating the debtors at night. They listen to what people are saying and threaten exposure if they do not pay a bribe. They drive herds of cattle through the town at night, blowing horns and making hideous noises. They are said to have the power of talking to a cocoanut tree, when all the fruit falls down, and they eat the contents without injuring the nuts. They are able to smell out anyone who watches their proceedings, when they duck him in streams and leave him up to his neck in mud. A man who underwent this punishment was unable to speak for a fortnight. No woman knows anything of these people. No one dares to give information on pain of impalement or providing a slave as a substitute. They are supposed to live in the sacred groves, where twins are thrown away, and lepers, those dying of small-pox, the deformed, and children dying before they cut their teeth are buried. No woman dares to cut firewood in the forests they occupy.

The Onyckolum compel a woman to marry, saying that if she refuses she will wed the great snake, Aké. In the last resort they force the parents to carry her

¹ *Journ. Anthrop. Inst., xxvii, Plate XX, Fig. 2.*

to another town to find a husband. They act as jesters, and mock at all deformed people or ridicule thieves and gluttons in public. They are accompanied in their nightly parades by a dog with bells.

The 'Mbuike come out dressed in grass, led by a man dancing like a bear. They carry a bag filled with short hard-wood sticks and stones, with which they pelt anyone they meet.

Each Egbo Society has its own special idols, horned wooden masks, grass, bamboo or cocoanut matting, dresses, bells, and other strange objects, among which are black wooden rattles, shaped like hour glasses, open at both ends, and containing several wooden clappers. Some of the idols, when properly invoked, are supposed to be able to answer questions regarding stolen property and similar matters. In some the lower jaw is worked by a concealed cord. The lower jaws of some of the masks also move. The small brown masks and the coloured masks, on the authority of Mr. Eveleigh Smith, are worn during Egbo plays. Children can belong to it and wear masks. Women and outsiders cannot wear them. The white masks appear to be worn only by members of the first grade, and those black and horned by those fully initiated. Women, on pain of death, are not allowed to see the black masks. The meaning of the tattoo marks on the masks is not clear. Possibly they may be some tribal sign. According to Mr. Eveleigh Smith the Ibibio Egbo Society has only two grades, the lowest, as usual, being the initiatory stage. Their dress is a simple garment with sleeves and legs, into which the wearer enters through a hole in the chest. Round the ankles is a fringe made of fibres of the Raffia palm knotted together. The higher grade has dresses covered with palm-leaf which are very elaborate.

Higher again than the Egbo is the Idiong or Idion, which none but a member of the Egbo can join. According to Mr. Eveleigh Smith this fraternity is open to all, either slaves or freemen; but probably a slave could not attain the higher positions. The first stage is merely probationary and the fee is about 800 or 1,000 Manillas or circlet composed chiefly of iron and worth from 1*d.* to 1*½d.* After payment of the fee the candidate goes through a rite, namely, consisting of feasting and dancing and is given a ring or circlet of palm fibre which he wears on his head until he can afford to pay the fee for initiation into the higher grade. On attaining this he wears a larger ring covered with goat-skin. Various points projecting from the circlet indicate the rank of the officials of the society. If the ring is wantonly destroyed the member loses his rights and has to pay again for their restoration. There are society secrets which no member dare to divulge. The rules forbid lying, theft, adultery, and are faithfully observed. Women can join the order and then are raised to an equality with men; if they commit adultery no one will punish or reproach them.

All members of the society can travel without danger. It is said they have an inner sanctuary into which only the high priest is admitted. They also profess to be rain-makers, and offer fowls and goats before idols for this purpose. A European if accompanied by a friendly Idion man can travel anywhere in safety.

Human sacrifices are sometimes practised among the Ibibios at the funeral rites of their kings, when a new market is opened or the trade of a market needs improving. It is also done at the performance of a religious play called Aikon. The victim, who is a slave, may be of either sex, but a boy or girl is preferred to an adult. The victim is held down while the executioner beheads him with a sharp matchet, not with one but with several blows. Each person present is supposed to tap the head with a small knife. The skull is finally put in the King's Ju-ju house. This play is performed yearly at the yam digging season. The people wear red cotton caps which they dip in the blood of the victim.

At another play a large bamboo table is brought out, over which hangs a long cloth reaching the ground. On the table are placed little figures representing men and women. These are made to move about and dance like marionettes. The operator is a man concealed under the table. Figures are also placed in the house erected for the spirits of the dead. These houses are regarded as sacred, but they are allowed to decay under the influence of time and weather.

In a place far up the Kivo-Ibo river, close to Aru, is supposed to be a holy woman who knows everything and can utter oracles. Only two persons, generally litigants, can visit the place at the same time. The mysterious voice calls to one or the other to confess judgment. It has been said that the defeated party is supposed to be slain by the spirit; anyhow he never returns home, for if he did his friends would not recognise him and would treat him as an evil spirit. Attached to this place is said to be a sort of priesthood, called "Long Ju-ju men."

At Little Popo in Togoland is a secret society known as Afá, considered to be higher than Egbo. They pretend to a knowledge of some sort of occult science.

Nearly all these tribal societies oblige their initiates to undergo circumcision. This may be one of the reasons why Muhammadans often obtain membership. They have perhaps some connexion with the society known in Egypt as Siri, of which there are various developments in the Sudan and Senegambia, devoted to the study of occult science.

The writer ends by suggesting that the Colonial Governments might utilise some of these societies in the cause of law and order.

DISCUSSION.

The PRESIDENT, in proposing a vote of thanks to Mr. Marriott for his paper, said that he thought the information that had been laid before them was of great interest. It had not pretended to be more than, in the main, a compilation, and students were grateful to any one who would save their time in this way, by gathering into a compact form all the scattered papers in rare or out-of-the-way journals. Such work did not in any way interfere with original research, but rather helped it. Some of the criticisms they had heard were thus scarcely called for by anything that Mr. Marriott had stated. The verdict of the majority of the speakers, all of whom had considerable experience of West Africa, was in approval

of the paper they had listened to, and he himself thought that Mr. Marriott was entitled to their thanks for the exhaustive and laborious paper he had prepared.

Mr. EVELEIGH SMITH.—I have lived only six years on the West Coast of Africa, but during that period have gone a great deal amongst the natives of the Hibio tribe, and have studied carefully their two great secret societies, Egbo and Idieñ. I have very little to add beyond what Mr. Marriott has already stated in his paper, save that I can vouch for the accuracy of his remarks concerning those two societies. The masks and idols on the platform were carefully collected by the late Mr. Van de Poel and myself, and they are genuine ones. With regard to the large black masks belonging to the higher grade of Egbo, no woman is allowed so much as a glimpse at them, death being the penalty if any woman should look at them. There is a great deal to be found out about these societies, and it does not follow because a man has lived for many years on the coast that he knows everything concerning them, as one may live all his life amongst a savage tribe where great secret societies exist, and yet know nothing. It is only by going amongst the natives, and gathering details bit by bit, that any really valuable information can be obtained.

Sir JOHN SMALMAN SMITH said that the statements in Mr. Marriott's paper were gathered from many and various sources, but none apparently were the result of that personal experience and observation which were indispensable if conclusions of any value were to be based upon them. It was impossible to deal with such a paper in a short speech, but he took exception to the constant use of such words as "*fetiche*" and "*Ju-Ju*," which were of European origin and did not represent the native idea.

In the Yoruba country the word "*Oricha*," meaning "an object of religious worship, ceremony or usage," was always used by the native, and "*Olorum*" represented the supreme god, the all-powerful the glorious one, the source of life and of the souls of men. It is, however, only the inferior gods who concern themselves with the affairs of the earth and its inhabitants, and these include a vast number both good and evil in their influences.

The powerful secret societies which existed all over the Yoruba country were termed among the Egbos "*Ogboni*," and amongst the Jebu people "*Oshogbo*." Their chief objects were to conserve the *Oricha*, but actually they controlled the kings of the country, and decided trade disputes and family differences in the manner prescribed by native custom. The members used signs and symbols, the meaning of which was known only to the initiated.

These societies were powerful, but their methods were not of a character to commend themselves to civilised peoples, nor would it be decent, even if it were possible, to utilise them as a means of government. Such an idea could scarcely have emanated from any one acquainted with the principles and practices which prevailed among them.

The town of *Ifé*, or *Illé Ifé*, as it is termed, is the most sacred place in the Yoruba country. It is regarded as the cradle of the human race. From here Ifa, one of the greatest of the gods, set forth to teach the rest of the world wisdom and the knowledge of the future. Many most interesting beliefs were attached to Ifa, who was a beneficent *Oricha*, and was invariably consulted as to the future, both in great undertakings and in the every-day affairs of life.

It was much to be regretted that so few ethnologists had devoted any attention to this most interesting country.

Mr. T. J. ALDRIDGE, F.R.G.S.—I was not aware that I should be called upon to take part in this discussion. I came this evening to listen to what I anticipated would be an interesting paper upon a somewhat abstruse subject, and I think we shall all agree that the lecturer has presented to us an instructive communication; and although Mr. Marriott has been unable from personal knowledge to give any lengthened practical experience upon the secret societies of West Africa, I venture to consider that by quoting from some of the best authorities he has done the next best thing to furnish us with information. My only reason for rising upon this occasion is that Mr. Marriott has referred to a part of the coast with which I have been associated for very many years—the Sherbro, the seat of the once notorious Human Leopard Society; and as possibly there may be some persons here to-night who may like to know something of that society's workings, I will briefly state some details in connection with it, although happily the remedial measures adopted by the Government about four years ago had been the means of practically putting a stop to these atrocious barbaric practices, and the recent native rebellion, followed by the naval and military punitive expeditions in the Imperri country with its water-ways, has, I hope and believe, thoroughly eradicated their organization and rendered this savagery a thing of the past. The Imperri was the great centre for this society. It does not appear that as an institution it was of any great age, possibly only some forty years or so, and I remember some twenty years back being told that it was then merely a family arrangement, the members working only amongst their own relatives, and that at the committee meetings of the society a relative of some member was selected and told off to be the next victim, and was subsequently waylaid and killed by some person in the guise of a leopard, who rushed upon the unfortunate and unsuspecting victim from behind, and planting a four-pronged knife of special make in the neck, separated the vertebra, causing in most instances instantaneous death. The body was then opened, and some of the internal parts were removed for the purpose of obtaining the fat which was considered to be necessary to preserve the magical powers of the country medicine, known as Borfima, with which members had to be anointed periodically. This Borfima was a highly prized fetish, and believed to be a panacea against all evil and to produce all good. The society after a time becoming too extensive to remain a family concern, it appears to have been changed into a public institution, that is, any victim could be taken from the general community, and we know, without a doubt, that the lives of many innocent persons were sacrificed in this manner. The *modus operandi* seemed to be that when a visitor appeared at any village, he was invited to partake of food, in which was mixed a small quantity of human flesh. The guest all unsuspectingly partook of the repast and afterwards was told that human flesh formed one of the component parts of the preparation, and that it was then necessary that he should join the society, which was invariably done. The initiation fee being the providing of a victim, it did not necessarily follow that the newly joined member should himself slaughter the victim; he need only furnish the victim, and there were persons who, upon payment, would carry out the murder. But happily, as I have stated, the persistent and effective measures adopted by the Government have been so

successful that I quite believe the Human Leopard Society is now simply a matter of history.

The Poro and Bundu and Bundu Devil are organisations of the utmost importance, and extend throughout the Mendi country, Sherbro, some 150 miles or more inland. They are institutions amongst the male and female communities respectively, but at this late hour I do not propose to enter into particulars respecting them, but for those interested I would remind them that in my paper to the Royal Geographical Society, in their Journal for August, 1894, these curious ceremonies are described.

LE COMTE DE CARDI.—I drew attention to the fact that Mr. Marriott's paper was mainly made up of copious extracts from the published accounts of others, and pointed out that, though he gave us several names of his authorities, the major part of the extracts that he read he most certainly *did not thumb-mark*, thus leaving the general public *to suppose that they were from his own investigation*. Knowing that Mr. Marriott had only been a few weeks in Western Africa and that he had never been in the district of the two secret societies of which he spoke the most, I pointed out that any well-wisher of the *Anthropological Journal* should jealously guard against anything being published in the *Journal of the Anthropological Institute* of which a part could be pointed to and denominated the work of a plagiarist. The only parts of the paper of Mr. Marriott that I could trace to Mr. Marriott's own labours were his deductions as to what use the secret tribal societies of West Africa might be to the British Government and his belief of what they taught. I said I disagreed with Mr. Marriott when he said "that the British Government could make use of these societies to assist in ruling the natives," my reason being that before any civilised government such as the British Government could make use of these societies they would have to be cleansed from their disgusting rites and terrible fetish oaths and practices. Once take away from them the fetish oaths and evil ceremonies, *then the fear* which the secret society engenders in the native mind would vanish and with it all respect for the laws of the secret society. Further, Mr. Marriott said, "Fetishism must not be confused with these societies. Spirit worship perhaps might be associated with them; but a mystic religion and belief in one God, a Creator from whom springs all life, and to whom death was but in some sort a return, was, he believed, the very inner secret of secrets; *more they did not teach.*" This assertion of Mr. Marriott's would lead any ordinary hearer to believe he, Mr. Marriott, knew all they did teach, for he says very distinctly, "*More they did not teach.*" (This and his former deductions were distinctly given out as his own—*no authority being quoted.*) This statement of his led me to think the study he had made of his subject was very superficial, because the veriest tyro in scientific research would have discovered that the teaching pointed to a species of Phallic worship, more than anything else.

ORDINARY MEETING.

MARCH 28TH, 1899.

C. H. READ, Esq., F.S.A., *President, in the Chair.*

The Minutes of the last Meeting were read and passed.

The election of Mrs. G. NEVITT BENNETT as Fellow of the Institute was announced.

The PRESIDENT introduced Mr. WM. CORNER, who proceeded to read his paper on "Mitla (State of Oaxaca, Mexico): A Study of its Ancient Ruins and Remains." This was illustrated by a good collection of lantern slides, maps, plans, drawings, and numerous antiquities that he had brought home.

He also exhibited a number of recent photographs of North American Indians, taken by Rinehart, Omaha, Neb., U.S.A.

The discussion that followed was contributed to by the PRESIDENT, Mr. A. P MAUDSLAY, Colonel G. E. CHURCH, Mr. LENNARD, Mr. A. L. LEWIS, and others, and a hearty vote of thanks was passed to Mr. Corner for his interesting paper.

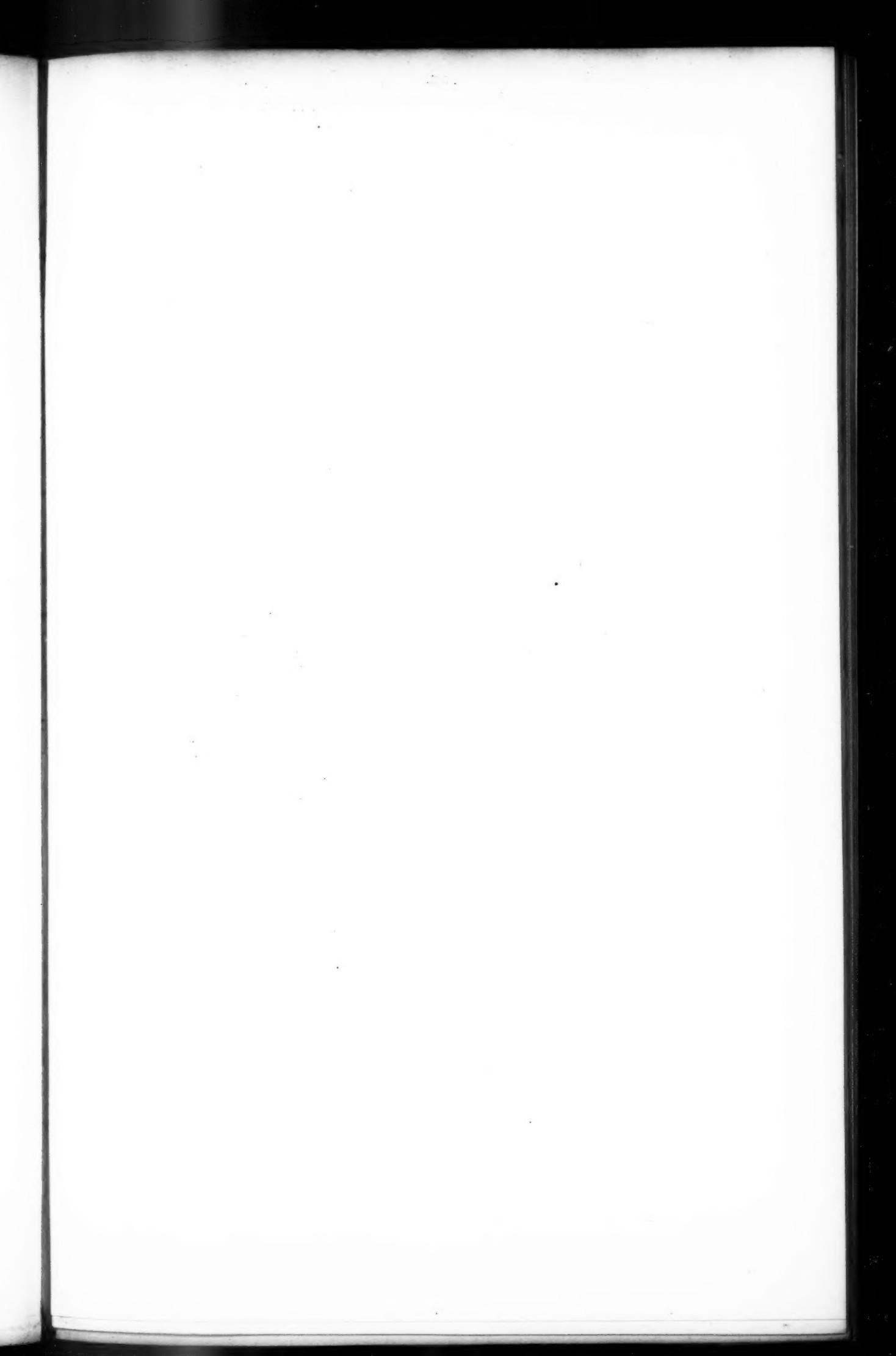




FIG. 47.



FIG. 48.



FIG. 49.



FIG. 50.



FIG.
51.



FIG.
52.



FIG.
53.



FIG. 54.



FIG. 55.



FIG. 56.

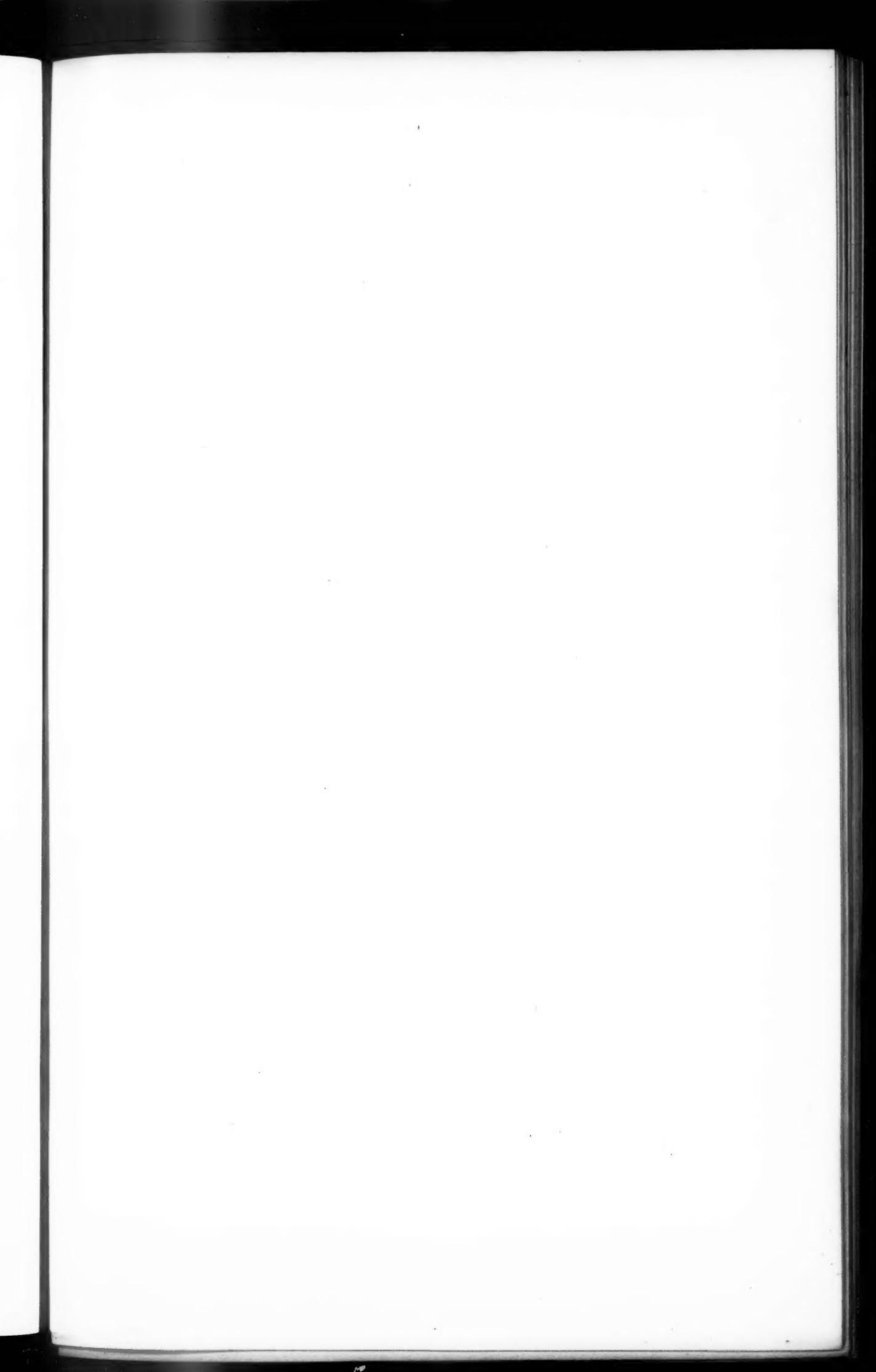




FIG. 42.



FIG. 43.

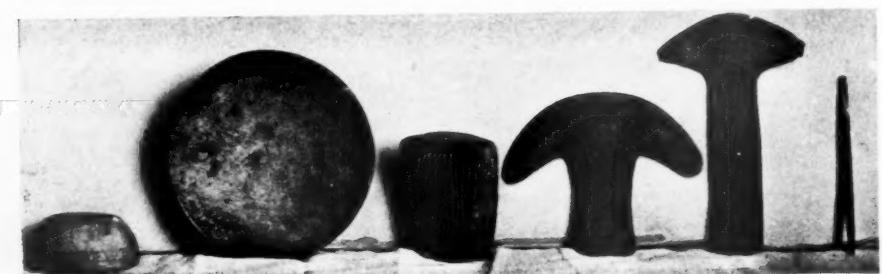


FIG. 44.



FIG. 45.



FIG. 46.

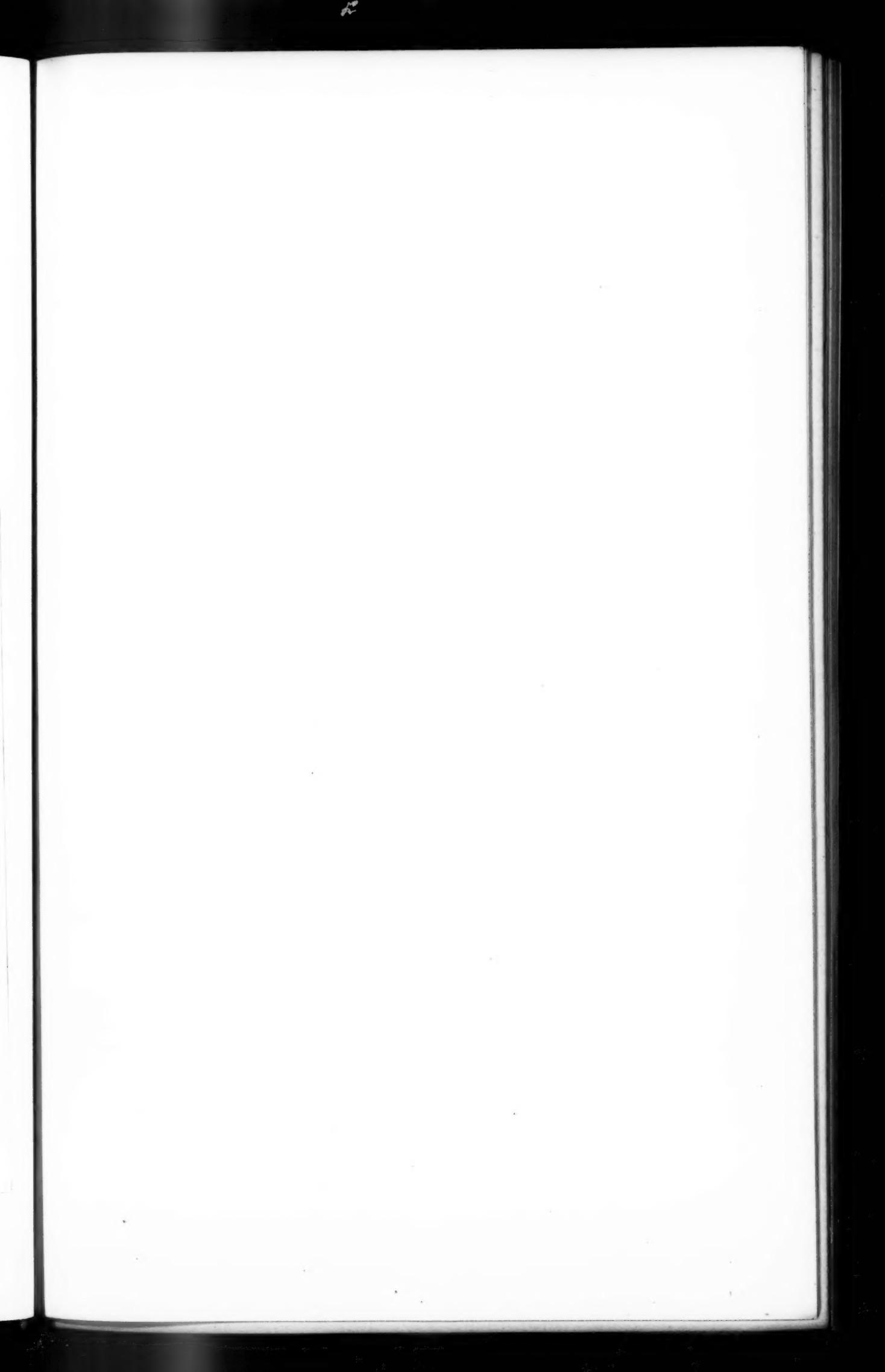


FIG. 37.



FIG. 38.
(Dr. Edward Seler.)

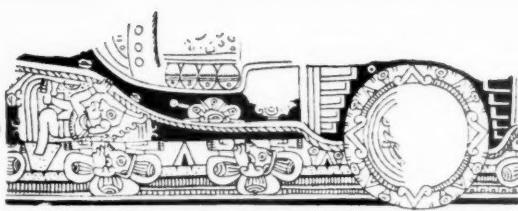


FIG. 39.

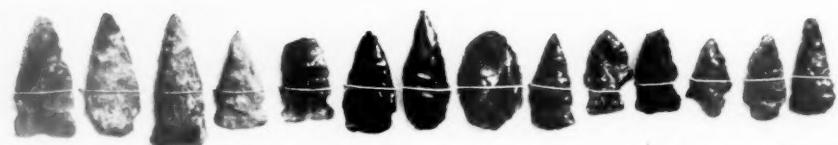
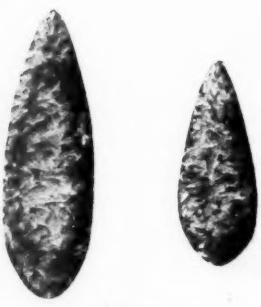
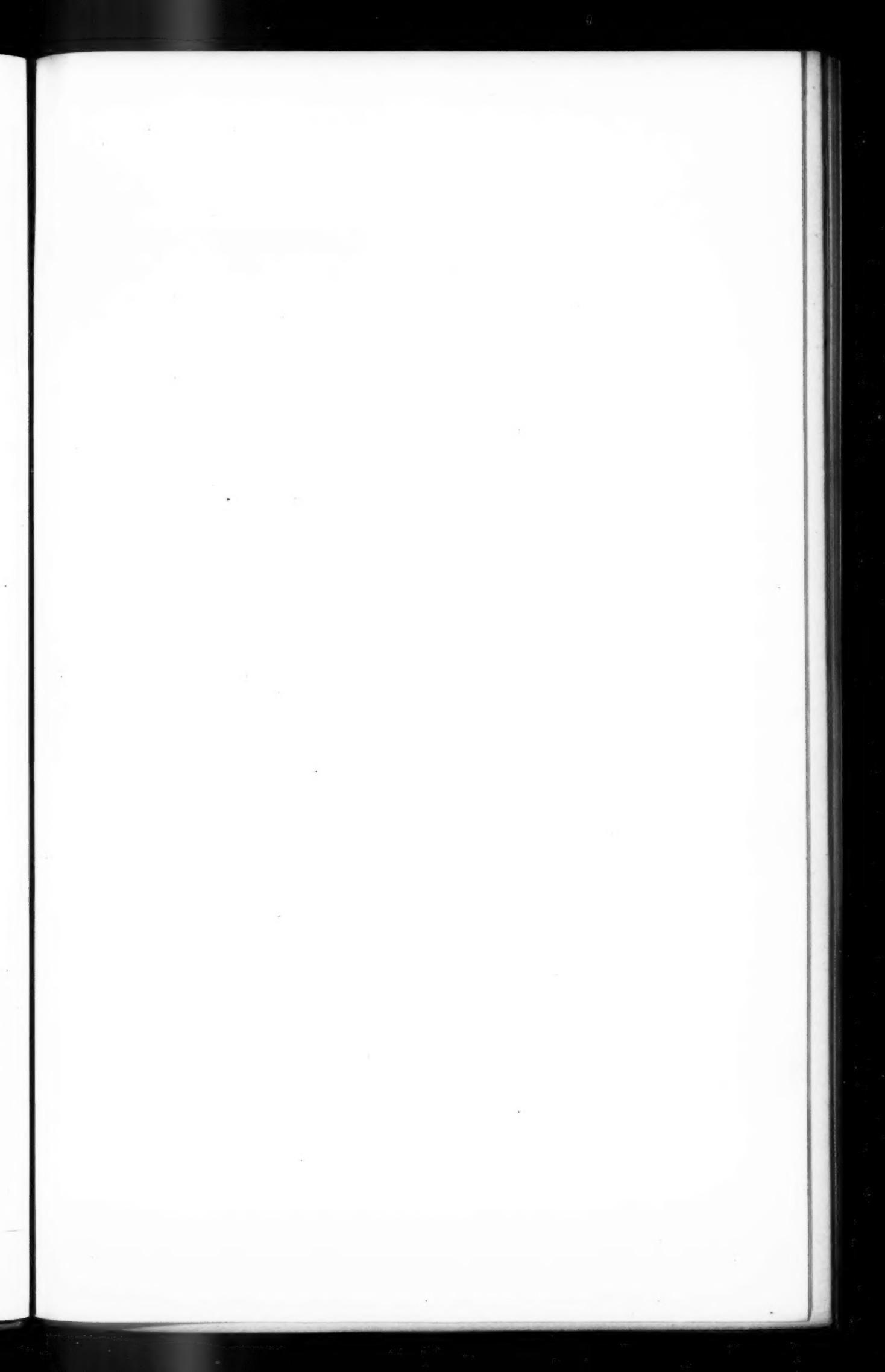


FIG. 40.

FIG. 41.

Scale





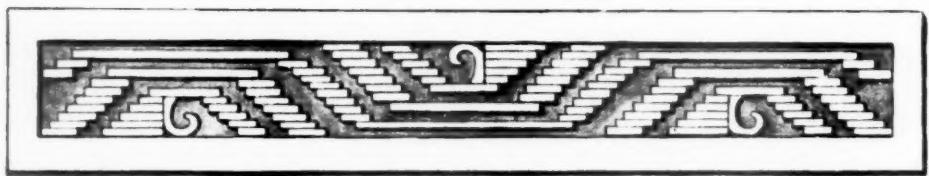


FIG. 27.

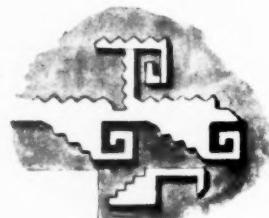


FIG. 28.



FIG. 29.

FIG.
30.



FIG.
31.

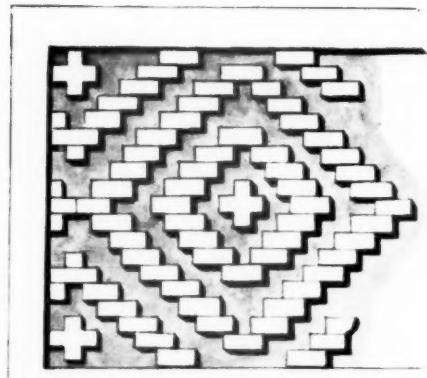


FIG. 32.

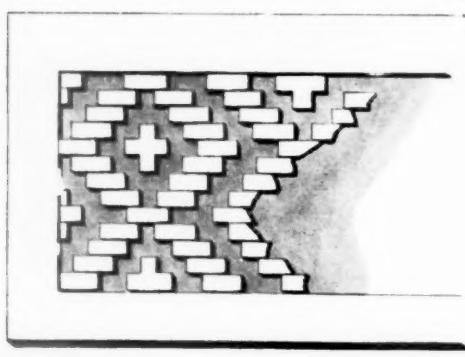


FIG. 33.

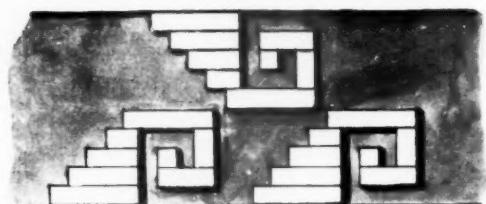


FIG. 34.

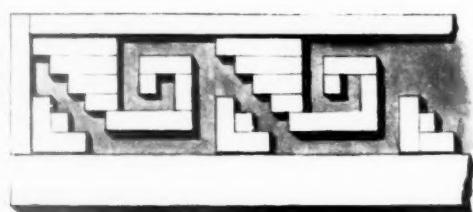


FIG. 35.

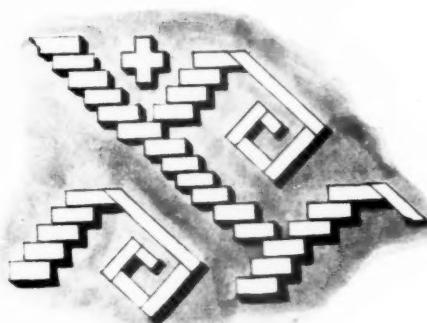
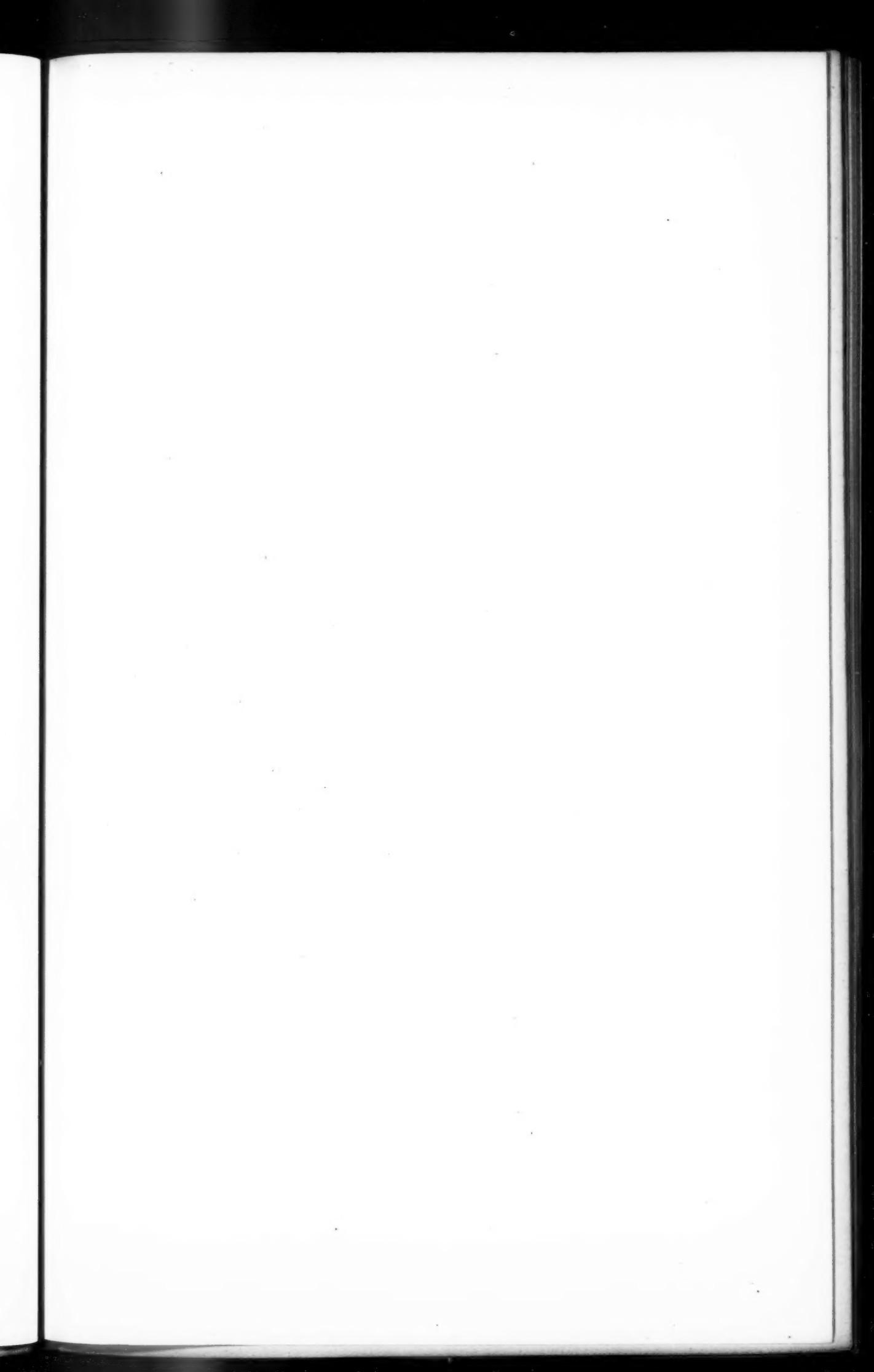


FIG. 36.



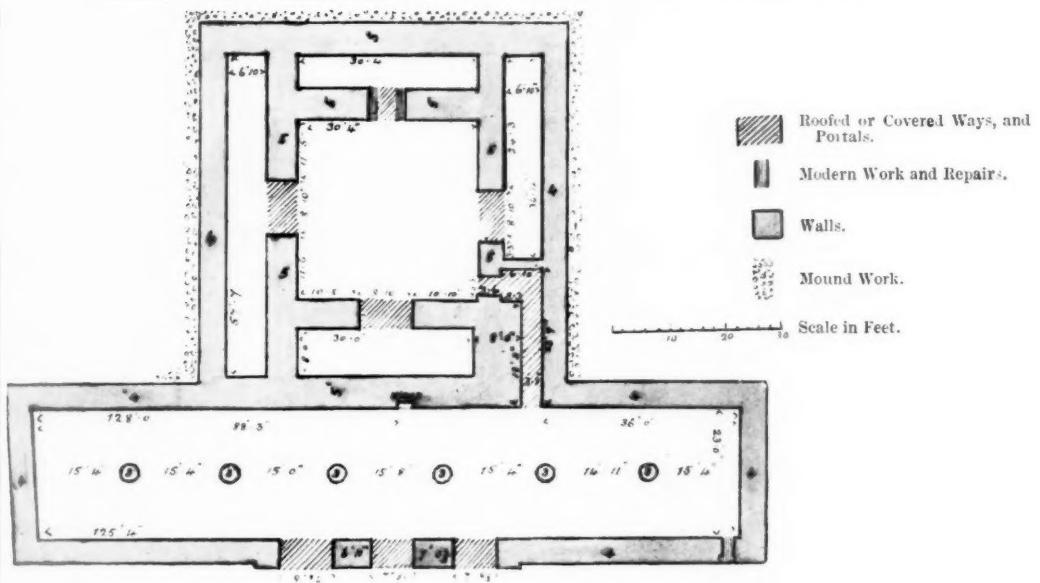


FIG. 21.

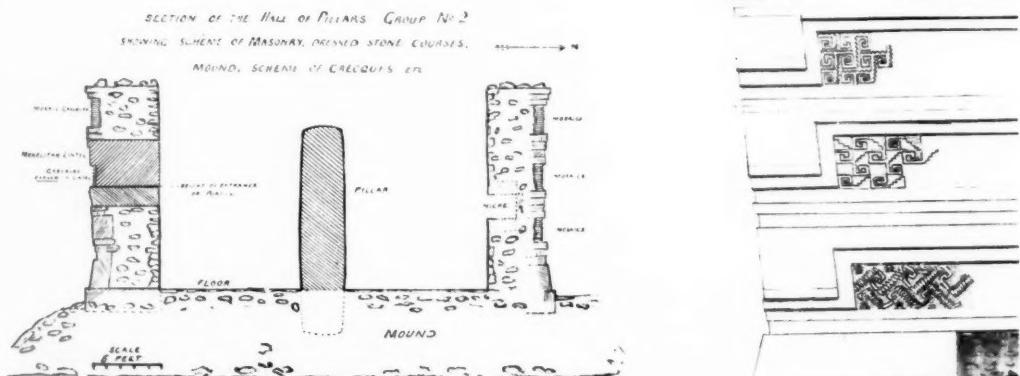


FIG. 22.

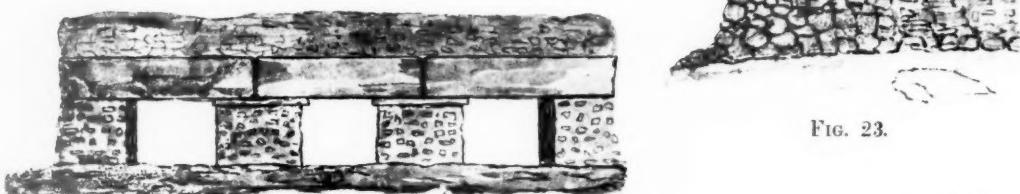


FIG. 24.

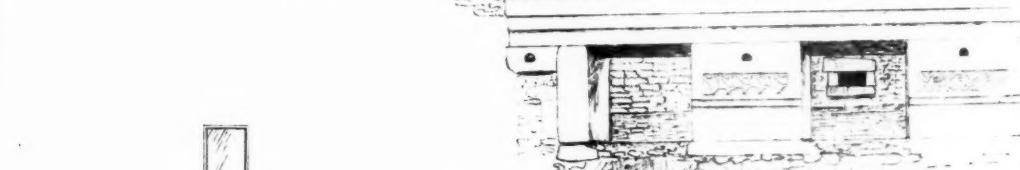


FIG. 25.

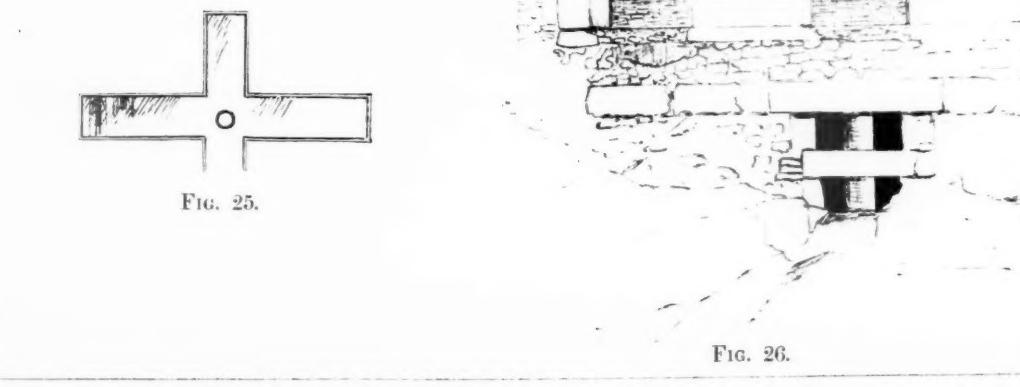


FIG. 26.

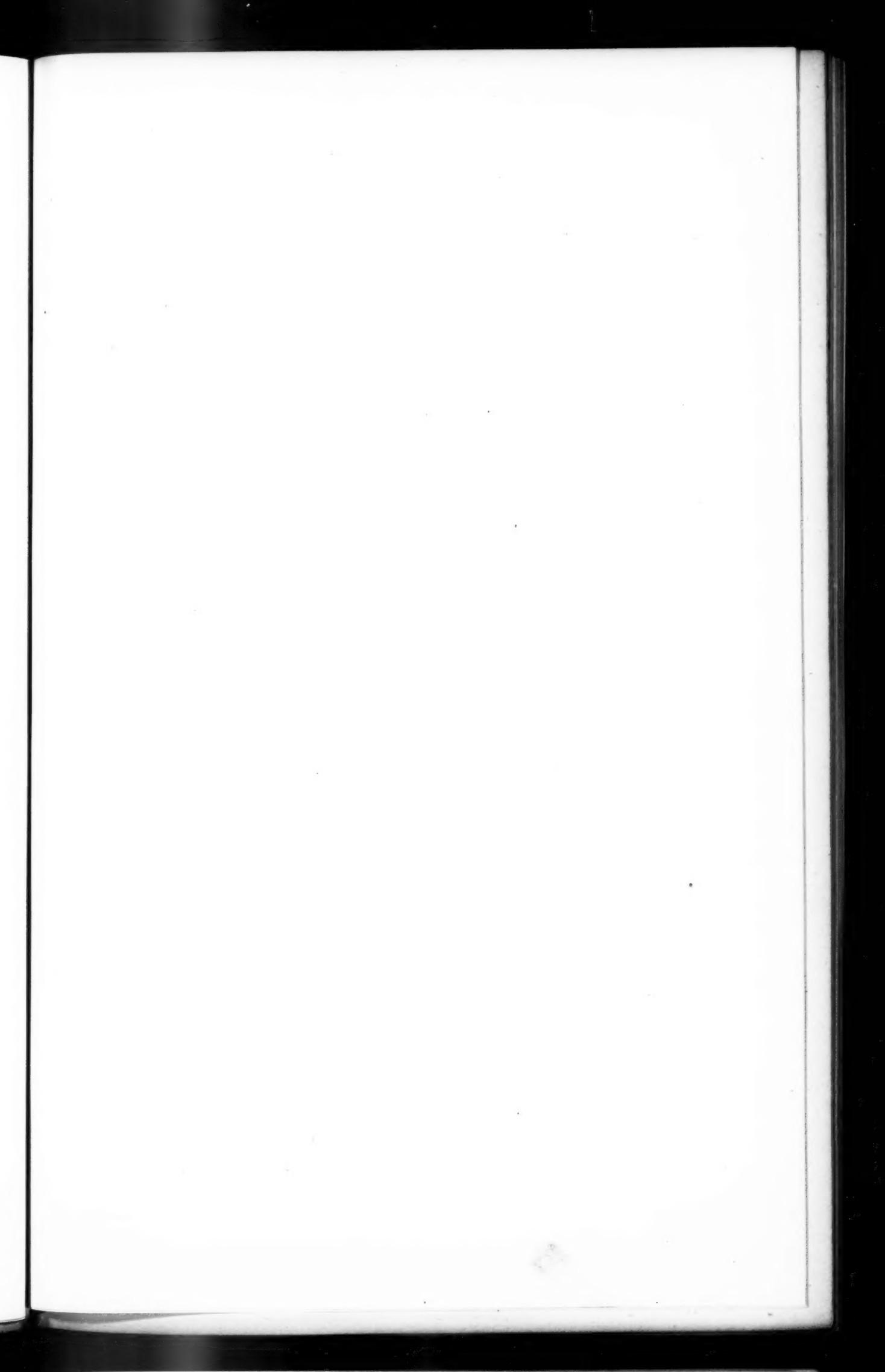




FIG. 15.

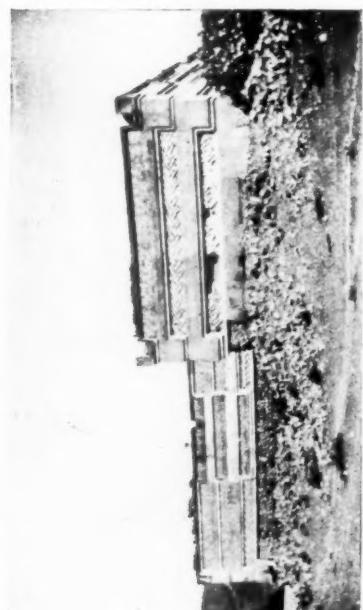


FIG. 16.



FIG. 17.

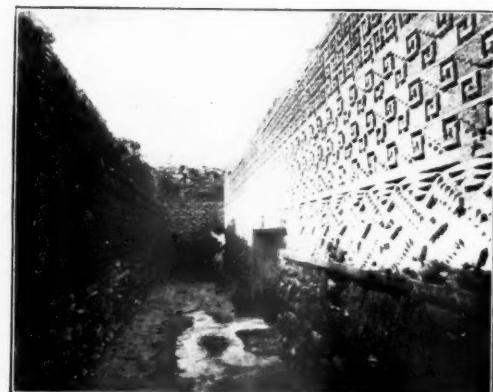


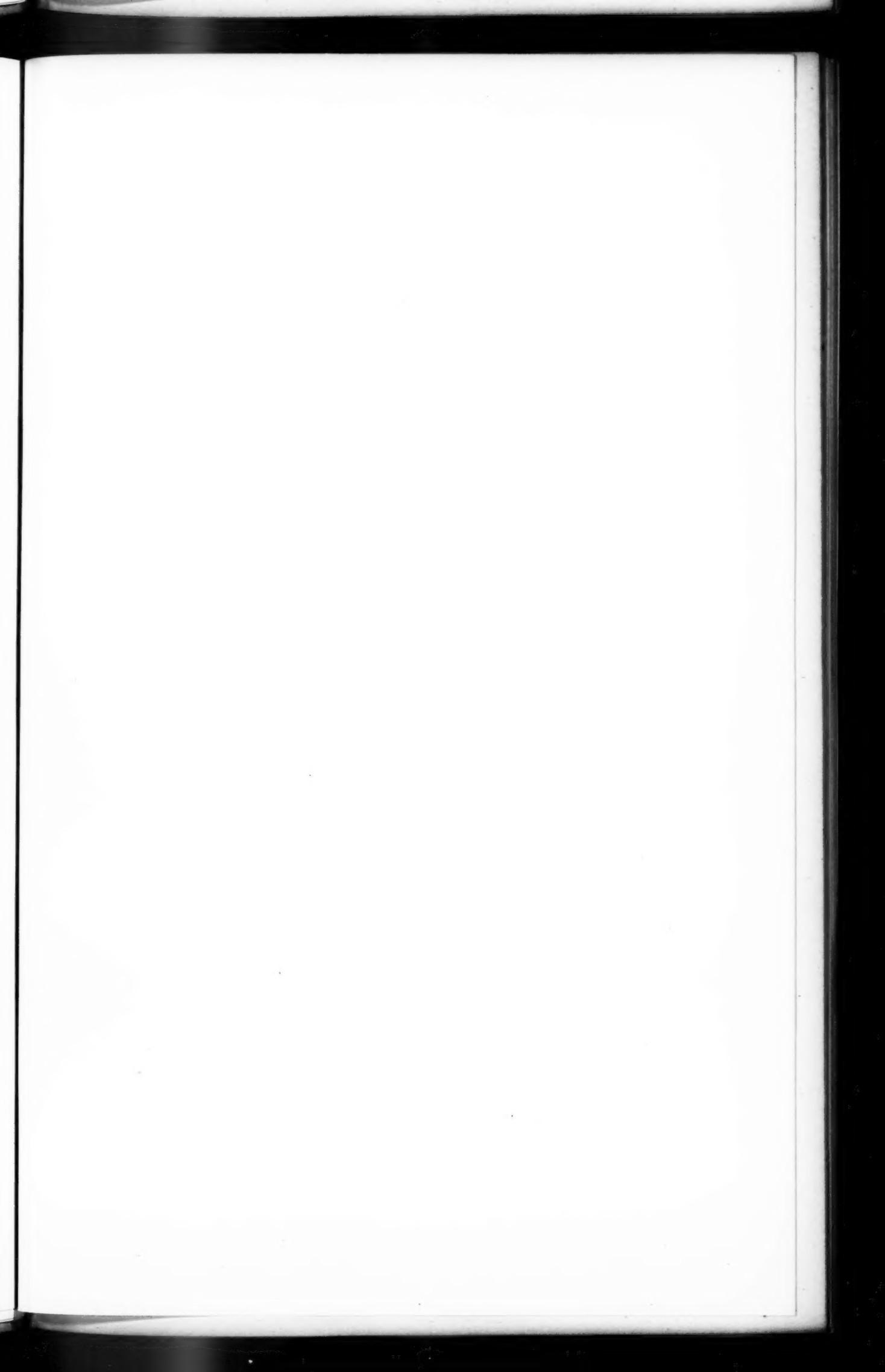
FIG. 19.



FIG. 18.



FIG. 20.



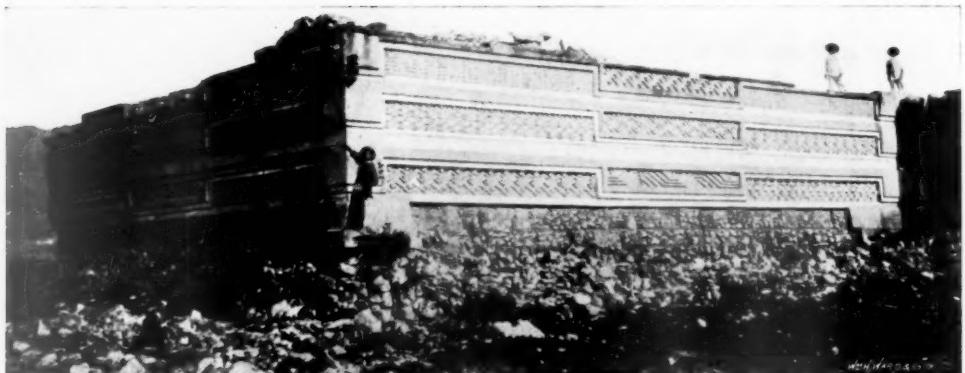


FIG. 11.



FIG. 12.



FIG. 13.



FIG. 14.

MITLA : AN ARCHAEOLOGICAL STUDY OF THE ANCIENT
RUINS AND REMAINS IN THAT PUEBLO.

BY WILLIAM CORNER.

[WITH PLATES I TO VII.]

MY communication deals almost exclusively with a description of the Tzapotecos remains and ruins at Mitla,¹ in the state of Oaxaca, Mexico. Upon the subject of the Tzapotecos race, the acknowledged builders of ancient Mitla, their origin, language, customs or beliefs, I scarcely touch. I attempt to explain neither the bearing these remains may have upon the questions of the art and culture of other aboriginal peoples of Mexico and Central America nor the general significance and relations of ancient Mitla. I feel that that is better left to those who have given a larger study to American Archaeology. I am here to offer a fragment of evidence, derived from my own investigations, in regard to a branch of the art of the ancient Tzapotecos people. This must be borne in mind in considering the scope of the communication.

I exhibit maps, plans, and drawings, to which I ask your attention. An examination of them will enable you to understand better my exposition of the ruins, and that notation of the different groups and classes of them which I have adopted, and to which I shall constantly refer.

Most of us have a notion, not altogether a correct one, it is to be feared, of what is called the "Ancient Civilisation of Mexico or of the Aztecs." A glorified idea has been acquired, principally from Prescott's *Conquest of Mexico*, a work which, perhaps, is as much the creation of a mind of poetic and imaginative

¹ The name "Mitla" is syncopated from Migitlan or Mietlan, probably by the Spaniard, with that indolent characteristic of his tongue which tends to soften all that seems harsh or to savour of trouble in pronunciation. The original "g" is an aspirate in Spanish. The word is not, of course, Spanish, but is presumably Nahuatl, and its meaning has doubtless something to say about the grave or death. By the Tzapotecos inhabitants the pueblo does not seem to be called Mitla, but Lyo-baa. "Mictlanteuctli (Lord of the land of the dead), the god of hell, which was a place of utter and eternal darkness" (*Anahuac*, by Dr. Tylor, p. 223). "Teoyaomiqui, god (or goddess) of war and death" (*Tour in Mexico*, by Mr. A. F. Bandelier). "Mietlan, signifying hell in this language" (Motolinía, also see Bandelier). It would be interesting to discover if "Mitla" or "Mietlan" is in any degree synonymous with the Tzapotecos Lyo-baa, or if it is a rough translation of it. Lyo-baa is variously interpreted, "Entrance to the grave" (Bandelier), "Place of woe" (Humboldt), "Place of sadness," and "House of the dead." It requires a knowledge of the two idioms, which the writer has not, to say. In accordance with such traditions as these names would seem to indicate, an ill-timed season or passing moods have caused more than one writer to describe the site of Mitla, in sympathy with its names, in gloomy language. The writer visited the pueblo in quite a different frame of mind, and found his way fall in not unpleasant places. It is true that the valley or basin of it is hemmed in by mountains on almost every hand, but he can bear witness that it is not always the abiding place of gloom.

temperament as the result of the knowledge, investigations, and researches of the trained historian. The romance of the subject colours this historian's whole theme. Since the publication of Dr. E. B. Tylor's admirable work, *Anahuac, or Mexico and the Mexicans Ancient and Modern*, in 1861, it has become more and more the fashion to regard the cultures of the native races as having important differences in degree, but that "the highest grade reached anywhere was a barbarism without iron or the alphabet, but in some respects simulating civilisation."¹ This attitude has so grown on later investigators and speculators that perhaps another extreme has been reached, and we find that a recent American author, who, being set the task of writing a popular account of the Mexican story, enters at the outset a gentle protest against this severe tendency in these terms:—"Empires and palaces, luxury and splendour, fill the accounts of the Spaniards, and imagination loves to adorn the halls of the Montezumas with the glories of an Oriental tale. Later explorers, with the fatal penetration of our time, destroy the splendid vision, reducing the emperor to a chieftain, the glittering retinue to a horde of savages, the magnificent capital of palaces to a pueblo of adobe. The discouraged enthusiast sees his magnificent civilisation, devoted to art, literature, and luxury, reduced to a few handfuls of pitiful Indians quarrelling with one another for supremacy, and sighs to think his sympathies may have been wasted on the sufferings of an Aztec sovereign dethroned by the invading Spaniard. Yet perseverance, after brushing away the sparkling cobwebs of exaggerated report, finds enough fact left to build up a respectable case for the early races of Mexico."²

What we are asked to accept as the inevitable conclusions of scientific research is one matter, and romance is another, and between the method of those who would severely discard all imagination in the work of research and reconstruction from material evidence, and those who have "allowed imagination to usurp the place of research and have written in the spirit of the novelist,"³ there is, assuredly, a safe middle course. Within this particular circle of knowledge there are abandoned inevitable conclusions as well as proscribed romance. American archaeology on the whole can hardly be approached without a little of imagination. Without at least a rushlight of it, prehistoric times of America are a ground for groping in. The difficulties that confront the student can scarcely be overestimated. He is not without picture writings, codices and glyptic records, yet he is without deciphered manuscript of any sort, unless the identification of a few carved symbols may be so classed. Even if he deciphered the most elaborate of the glyphs of which he has knowledge, they appear to be of so rudimentary a character as to give little hope that their record would cast much historic light on the riddles of Central America. He has to discount the exaggerated romance of conquerors and early pioneers and their points of view to establish. He has to deal with complications which contact with various European nations has produced, and persistent and

¹ Mr. John Fiske's introduction to Miss E. D. Proctor's *Song of the Ancient People*.

² *Mexico*, by Susan Hale.

³ Sir John Lubbock's *Prehistoric Times*, 5th edition, p. 1.

inappropriate analogies to combat and discard. Monuments have been obliterated, remains and ruins have been rifled and despoiled, not only by relic and treasure hunters, but by ill equipped explorers. Many of the best primitive specimens and reliques have been removed from their homes without adequate or authentic geographical and historic certificates. There has been extermination of innumerable tribes and removal of others. In the face of these and similar difficulties, an enormous amount of the best kind of modern work has recently been done, collections made and data and facts assembled, by trained men and expeditions under the Governments of the United States and Mexico, under United States Universities and Institutions, not to mention valuable European help. In spite of these labours American archaeology is, as a science, unformed and unsystematised.

The interpretation of all that surrounds the ancient civilisations or cultures of America is vague and unprecise, of the meaning of its architecture, of the origin and development of the religion, ritual, customs, usages, early tradition, and modes of life. It is all so shrouded in mystery and the riddles are so fascinating that the most critically disposed explorers have been allured to theorise and guess. The glamour has far from disappeared, and we return with pleasure to Prescott's valuation. Popularly, indeed, all the old civilisations of the native Mexican races are generalised "Aztec," and the term "Aztec" is inclusive in the minds of most of us.

But the Aztecs, although holding the most important political position at the time of the Spanish Conquest, were not the only race which had reached the borders of civilisation.

The beautiful remains at Mitla,¹ in the Zapoteco territory, are one of the notable proofs of the prevalence of an almost level advance amongst the other Mexican races. A journey of about 300 miles from the city of Mexico, which,

¹ Mr. A. F. Bandelier writes and quotes as follows, in regard to Mitla: ". . . In his relation of the flight of Quetzalcoatl, Sahagun makes the singular remark that, after leaving Tecamachalco, Quetzalcoatl 'made and built some houses underground, which are called Mientlancalco.' It is easy to recognise here a misprint for Mictlancalco, and the subterranean buildings agree very well with the architecture of Mitla, or Mictlan." Again, "It is singular that, while the Nahuatl language is useless in these places, the local names are all in that idiom. This territory was, at one time, invaded by the Mexicans and their confederates, and the latter thereafter gave their own appellatives to the places, communicating them to the Spaniards, through whom they became permanent." This remark refers more particularly to territory farther north than Oaxaca, but would seem to apply with equal force to some parts of the valley of Oaxaca. Again, "Mitla is an old pueblo. Fray Martin de Valencia visited it about 1533. There are notices of it in 1565 and 1574, at the Archivo General. It then had a Gobernador of its own, which shows that it was an autonomous community." Again, "The earliest mention of Mitla known to me is from the pen of Motolinia, who writes that when Fray Martin de Valencia went to Tehuantepec (about 1533) with some companions, 'they passed through a pueblo which is called Mictlan, signifying hell in this language, where they found some edifices more worth seeing than in any other parts of New Spain. Among them was a temple of the demon, and dwelling of its servants (*ministros*), very slightly, particularly one hall, made of something like lattice-work. The fabric was of stone, with many figures and shapes; it had many doorways, each one of three great stones, two at the sides and one at the top, all very thick and wide. In these quarters there was another hall containing round pillars,

it will be remembered, is the site of the ancient Aztec capital, in a south-easterly direction, brings us to Mitla. The small village, or pueblo, of St. Paul of Mitla is situated at a point about 35 or 40 miles south-east of the city of Oaxaca, in the state of Oaxaca, just 17° north latitude. The ancient remains known as the ruins of Mitla are in the northern precincts of the village.

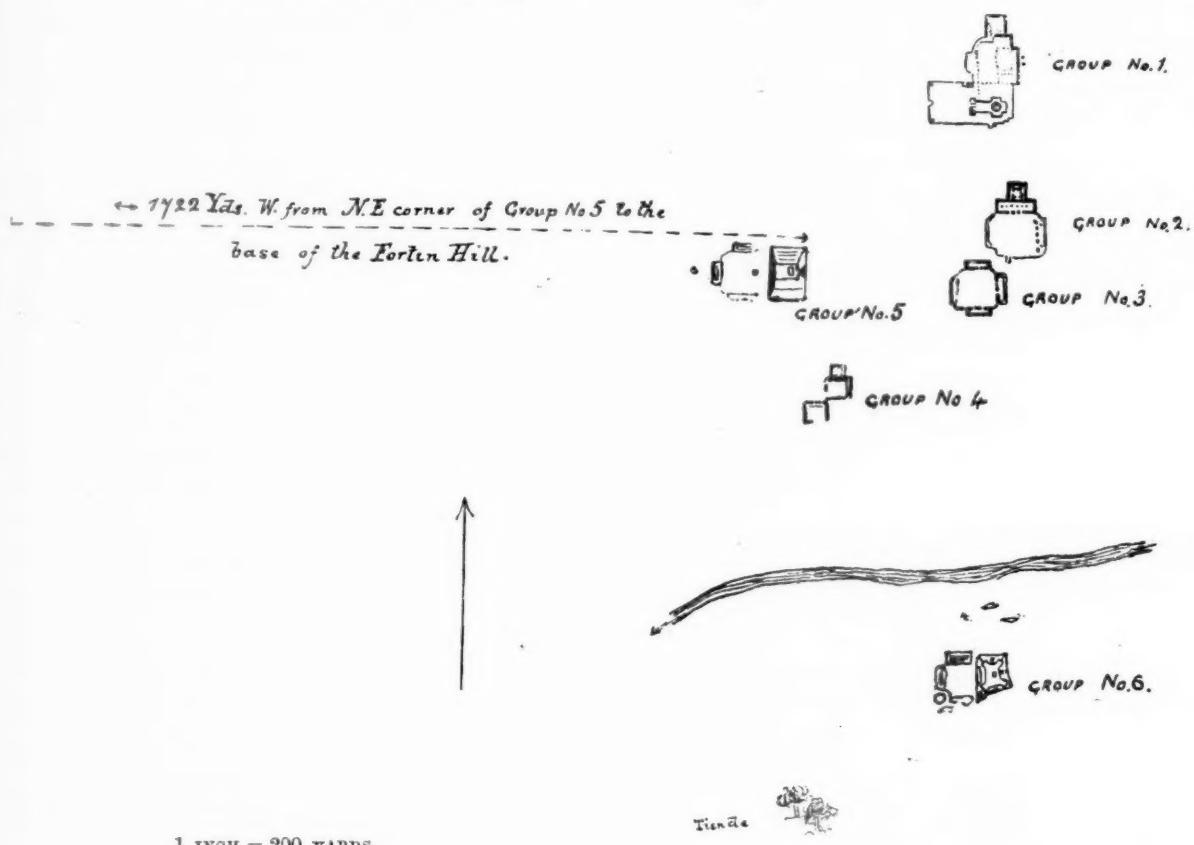


FIG. 1.

Group No. 1.—Palacio type, church or north group of ruins. Group No. 2.—Palacio type containing plaza, rooms, hall of pillars, and inclosed square or patio. Group No. 3.—Palacio type, containing plaza, rooms, small cross basement under its north room, with what is locally called "pillar of death," and contiguous with the south-west corner of Group No. 2. Group No. 4.—Palacio type, irregular group of squares having plazas and rooms. Group No. 5.—Teocalli type, including large teocalli and smaller truncated pyramidal mounds. Group No. 6.—Southern teocalli group, similar to Group No. 5. Group No. 7.—Fort on a hill a mile west of Group No. 5.

each one of a single piece, and so thick that two men could barely embrace one of them ; their height might be 5 fathoms. Fray Martin said that on this coast people would be found handsomer and of greater ability than those of New Spain.¹ This statement has been copied since, with slight alterations, by the Franciscans Mendieta and Torquemada.

"We easily recognise in the above description the cluster B (Group No. 2) at Mitla, with the Hall of Columns." See report of *An Archaeological Tour in Mexico, in 1881*, by A. F. Bandelier, pp. 263 and 264, 267, 277, 323.

Mitla, then, is, in a manner of speaking, a half-way house between Nahuat and Maya territories.

A traveller from the north arrives at Mitla by the Tlacolula road, and his entrance to the village is made at its south-western end. From the plaza of the modern settlement, where some very fine mountain fig trees spread wide branches, all the ruins, with the exception of the western fort on the hill, lie in a direction north and easterly of north. The site of Mitla is broken and irregular, and the general dip is from north to south. A small rugged watercourse, from east to west, divides the settlement, and one of the Teocalli groups, with groups of lesser mounds, are on the south side.

There are two very distinct classes of ruins in the immediate precincts of the pueblo of Mitla, the "Palacio," and the "Teocalli" or pyramidal mound of worship. There is one other class, a mile from the pueblo, which is merely a wall or fortification crowning a prominent and isolated acropolis-like hill just west of the settlement. The remains for which Mitla is rightly famous are those called by the natives "Los Palacios,"¹ or the Palaces. The most striking of these are Groups Nos. 2 and 3, situated rather centrally a little south of Group No. 1 and the pueblo church of St. Paul. The church² and its attached buildings are built into the south portion of Group No. 1 (Fig. 13, Plate I). The Padre, whose house is one of the attached buildings, was absent when I was in Mitla, and I failed to obtain a thorough examination of this group. The best I could do was to survey its outlines and those of the church and to climb over barriers and take such measurements as were accessible. These remains have been much cut up. The group on the whole more closely resembles in plan No. 4 than any other, and seemed to consist of a sequence of squares or small patios, probably three, surrounded by rooms of similar construction to those in other groups and connected by short passage-ways. The northern and eastern walls were in the best preservation, and they possess panels of interesting grecques, mostly similar to those in Groups Nos. 2 and 3, yet to be described. The construction of walls was also similar, but they were not on mounds. The lintel picture paintings, which are fragmentary, I was unable to obtain a sight of. I obtained, however, a photograph in Oaxaca of some of the Mitla paintings. (They occur only in Groups Nos. 1 and 4; for those in Group No. 4 see Figs. 37 and 38, Plate V.) The restorations (Fig. 2 and Fig. 38, Plate V) are by Dr. Edward Seler; I am indebted to Mr. Maudslay for kindly calling my attention to them. It will be noted that these paintings bear a marked resemblance to other ancient picture writings and paintings of the races of Mexico

¹ This is in a way a misnomer, for they are probably palaces in no sense except that they are very handsome structures—that is to say, they are not likely to have been merely residences for either a priesthood or for chieftains.

² In the church tower is hung a fine pure copper bell, dedicated and dated:—

"SANCTE PAVLE APOSTOLE ORA PRO NOBIS MAIO 26 DEL AON 1781."

This inscription is around the rim of the bell. There is an error in the transposition of the letters of the word "Año."

—the calendar circle, the grotesque, stunted and marked figures of humans, the mysterious signs, symbols, circles, dots, lines, and quarterings, all of which are more easily illustrated than described.

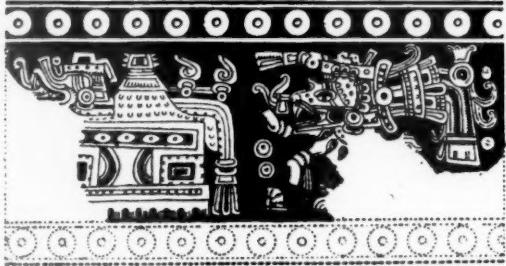


FIG. 2.
(After Dr. Seler.)

There are two cylindrical monolithic pillars supporting the Padre's porch, but if they rightly belong to this group or have been removed from Group No. 2 is a question. That they are not in their original position is certain. In other respects than these mentioned it will suffice to describe in detail Groups Nos. 2 and 3, which

are by far the best preserved remains, and the class of structure has its chief characteristics in common in all the groups.

Group No. 2 lies a little to the south of the church group, and No. 3 is contiguous with the south-west corner of No. 2. No. 2 is the most famous, the most beautiful, and the best preserved of all the Mitla remains, and it will, for that reason, be more specifically described, and because it is a type of the others of the class. Its outline or shape is as follows:—A very beautiful and elaborately designed square building (Fig. 11, Plate I; Fig. 21, Plate III), $62\frac{1}{2}$ feet square, encloses four rooms a passage-way and a small central patio or plaza. The south wall of this square is the north wall of an oblong room, which may be appropriately called the "Hall of Pillars" (Fig. 12, Plate I, and Figs. 17 and 18, Plate II, and Figs. 21 and 22, Plate III), because it possesses, still erect, six huge monolithic pillars. This hall or room projects east and west of the south side of the square. The square and hall form one compact unit (Fig. 16, Plate II) of Group No. 2, and entrance can be only made through the three separate portals or entrances, side by side, centrally situated in the south wall of the hall (Fig. 12, Plate I). This south side is confronted by an open plaza, which is apparently depressed below the level of the hall floor some 7 or 8 feet, the actual fact being that the buildings enclosing it are erected on mounds or terraces, which will be described. The plaza is 49 or 50 yards wide east and west, and about 41 yards north and south, the latter measurement cannot be given exactly, because the opposite (south) room is so entirely in ruins that only what seem to be the foundations of the outer or most southerly wall of this group can be traced, and to that outer point the measurement is 49 yards, and of course the unknown width of the south room must be deducted. Various opinions are held as to the existence of this south room, but I consider the evidence in favour of it. The east, west (and south) sides of the open plaza were bounded by solitary rooms resembling in shape and general design the Hall of Pillars, but of rather smaller dimensions. The west and south rooms are entirely in ruins, only some of the foundations being traceable; the east room had three central entrances or portals, and while the structure is ruined, there

are sufficient remains to show that its general design was similar to that of the Hall of Pillars, and it had pillars itself, two of them only remaining in place. It is not unreasonable to suppose that a certain symmetry in the group was observed, that the west and south rooms were of similar design.

Foundations:—No excavations seem to have been made for foundations. The ground is rocky, hard and solid, and the design of the architects seems rather to have been to raise low mounds of rough stone and adobe for foundations above ground (Fig. 22, Plate III), the floors of the rooms being from 6 to 8 feet above the plaza level. That these mounds were faced on the outside by fine friction-dressed stone there is no doubt, but the regular manner in which the foundations of the north square of this group have been stripped (Fig. 23, Plate III) indicates that it must have made a rare quarry for succeeding generations. For the filling in these mounds the builders used about an equal amount of adobe and rough stone.

Walls:—The filling of the walls was much the same as that of the foundation mounds. The stones seem rather more regular, and courses were perhaps better defined (Fig. 22, Plate III). Some explorers recognise the mud of the filling as mortar. I should say that it is simply a limey mud of the locality. It is not *made* mortar as we understand it. It is for the most part friable. No mud was used between the joints of dressed stones, which indicates that the builders did not regard it so much as a cementing power as an interstitial filler. Wherever the dressed stone for facing, moulding, or decoration is used, the dressing of stones whose surfaces are exposed is so accurate and fine that joints are barely perceptible. This, indeed, is one of the remarkable features of construction. However large or however small the stone, its dressing is done with equal care, precision, and nicety, and some of Mitla's stones are very large and heavy, and some, as in the grecques, are small.

Beginning at the north square, which is in a high state of preservation:—

Its corners (Fig. 11, Plate I, and Fig. 23, Plate III) are protected by three massive corner-stones built up of courses of exquisitely jointed and adjusted dressed stone. The exterior angles, formed by the walls of the square meeting the north wall of the Hall of Pillars, are similarly protected by angle-stones. The exterior face of each of the walls of the square has a slight overhang or outward batter, which is accentuated by the inward batter of the mound facing (Fig. 23, Plate III), and it is divided into nine oblong spaces (Fig. 11, Plate I) or rectangular parallelograms (about 2 feet by about 20 feet, upwards). These spaces are decorated by very beautiful grecques, framed, so to speak, by the successive continuous superincumbent courses of heavy dressed stone, which keep the small individual portions of the mosaics or grecques in place. The plain framework projects (and recedes) slightly, in courses over the elongated spaces of grecques. One course—the one nearest the grecque plate or space—passes in a continuous crank-like meander, not only alternately over and under the grecque spaces, but is so arranged that this meandering course passes underneath the slightly protruding

corner and angle blocks, which intensifies the outward batter of the walls at the corner.

The grecques are only mosaics in the sense that patterns are produced by a combination or arrangement of separate pieces of stone. The patterns are not

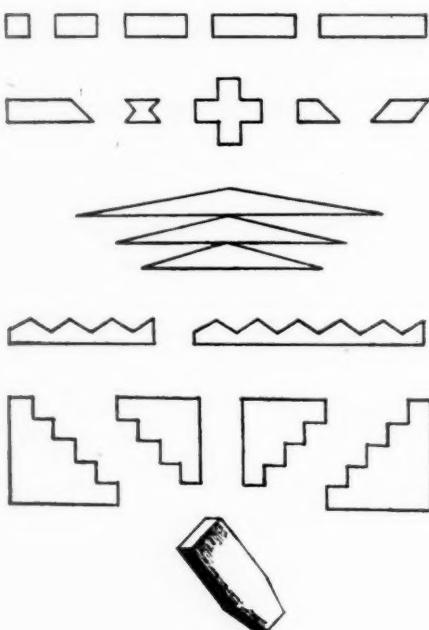


FIG. 3.

produced by tint or colour on a flat surface, but by the raising in a relief of 1 or $1\frac{1}{2}$ inch of a pattern in pieces of stone above a groundwork of depressed similar pieces. In Fig. 3 are indicated some of the surface shapes of the raised stone. Sometimes, but not frequently, the surface shape is not the same as a section of the root of the stone, and very occasionally an intricate form or a rudimentary curve is carved in a block and so inserted among the mosaic pieces. The vastly preponderating portion, however, is made up of the comparatively small individual stones. Sometimes, again, a huge lintel interrupts the course of the grecque spaces, and then the lintel is carved to imitate the mosaic pattern.

The patterns (Figs. 27 to 36, Plate IV) are always rhythmical, and they are

designed with artistic skill. In each separate oblong space the same unit pattern is repeated to fill it, but seldom exactly the same patterned space is repeated on the same wall. The three horizontal courses of mosaic spaces encircle the walls of the whole buildings outside, and are only partially interrupted by the central portals, which overlook the plaza (Fig. 12, Plate I). The effect is very beautiful and very wonderful, and these decorations and the monolithic pillars and lintels are the distinctive characteristics of the Mitla remains. Without cement, without a true mortar, mostly by fitting and a heavy superincumbent weight, assisted by the imbedding of the ends in the filling of mud, these grecques have yet lasted for centuries. They are the more astonishing when it is considered with what crude tools the work was performed and apparently without previous models,¹ certainly without a knowledge of iron or a perception of exact measurements. The horizontal length or depth of the mosaic stones from their front surface to their imbedded ends varied from 3 or 4 inches to a foot or more. There are few loose

¹ There are at Palenque, Uxmal and elsewhere some mural ornaments resembling in form and somewhat in the manner of construction Figs. 34 and 35, Plate IV. These might, perhaps, be regarded as rudimental prototypes, but they are nowhere worked out with the precision and elaboration that distinguish the Mitla mosaics. Some of these may be noted in the beautiful illustrations of Mr. A. P. Maudslay's "Archæology," in the *Biologia Centrali Americana*, Part V, Plate III; Part VI, Plate XV; Part VII, Plate II,

stones to verify variations. Some were evidently pointed as if to facilitate driving in adjustment. Their material is a finely grained quartz trachyte. A specimen of it is on the table.

As may be seen in Plate IV, their designs or patterns are more easily illustrated than described. The Greek key in many variations, the diamond, the crank and the steps are largely used. There are few curves, and they are nowhere conspicuous. I remember only one rudimentary one in all this building, a solitary and simple form of ram's horn ornament in a pattern otherwise made up of graduated lengths of horizontal parallelograms of stone, Fig. 27, Plate IV, whose measurements are about $1\frac{1}{4}$ inches wide by from 4 inches or 5 inches to 2 feet or 3 feet long. The predominating surface shape is a narrow parallelogram of varying lengths, from $1\frac{1}{2}$ inches to 2 feet, mostly lengths of from 3 inches to 8 inches. There are also notched and stepped parallelograms and triangles, etc. (Fig. 3). Mr. Maudslay recently called my attention to three other curves (Fig. 4) which are illustrated by Mr. W. H. Holmes in the very careful survey and examination of the remains which he made for the Field Columbian Museum, Chicago. Figs. 4, 5, 6, 7 are reprints from his drawings illustrating some characteristics of the grecque work which he noticed. Figs. 5 and 6 indicate what the writer himself noted, that in rare instances certain central curves and angle pattern joints are carved instead of being worked out mosaic-fashion. This elementary carving is also occasionally found in the simpler forms of stones (Fig. 7).

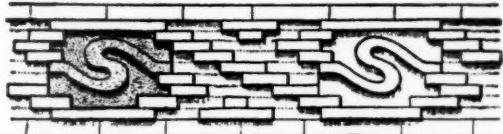
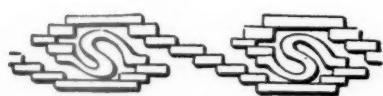


FIG. 5. (After Mr. W. H. Holmes.)

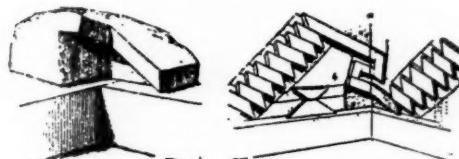


FIG. 6. (After Mr. W. H. Holmes.)

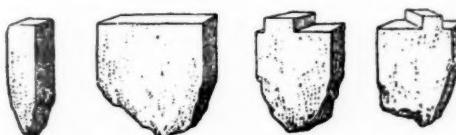
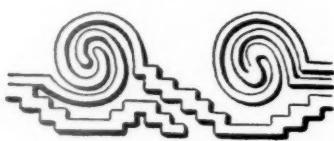


FIG. 4.
(After Mr. W. H. Holmes.)

FIG. 7. (After Mr. W. H. Holmes.)

It is important to note the carving mentioned, in the lintels and in the few stones of the mosaic patterns, because it constitutes the only carving now existing at Mitla to indicate that the builders had any knowledge of the art. Of other

ornament than these geometric mosaics there is little, unless the chaste and sustained effect of the clean bandlike courses of dressed stone around the walls may be classed as ornament. It is in perfect taste, and is very fine. As to other ornament it is within possibility that some parts of the walls, perhaps as a dado in some of the rooms, were plastered and coated with a thin shell of hard plaster with a smooth, almost polished, surface. A specimen of such plaster, of a dark red colour, taken from the covered passage-way leading from the Hall of Pillars to the patio, lies on the table. The wall had here been protected from the seasons. It is reasonable to conjecture that some of the stripped walls were similarly embellished. The Hall of Pillars, for instance—its interior walls could not have been in the stripped state they now are (Fig. 18, Plate II). There is not a vestige of mosaic work or other ornamentation in it, although the other rooms in its neighbourhood are rendered very beautiful.

There is no trace of sculpture of any form of life whatsoever. The builders of Mitla could scarcely have been ignorant of this art, for most ancient graves in and about this valley and the valley of Oaxaca, on being opened, reveal carvings (Fig. 46, Plate VI) and engravings (Fig. 43,¹ Plate VI) in jadite and other stone and modelled clay effigies (Figs. 51, 52, 53,² 54, and 55,³ photographed from the collection of Dr. Sologuren, of Oaxaca, and some of the pieces and fragments, of Figs. 48 and 49, from my own collections, see mask fragment of Fig. 48, and central stone effigies of Fig. 49, all on Plate VII).

Rooms.—There was no doubt a total of eight rooms, and a covered passage-way in Group No. 2 (Fig. 21, Plate III and Fig. 1).

In regard to size, the Hall of Pillars is the most imposing. It is (central measurement) $126\frac{1}{2}$ feet long by 23 feet wide.⁴ It has, running east and west, a middle line of six monolithic pillars (Fig. 17, Plate II). The cylindrical pillars have neither base, plinth, nor capital. They are of quartz trachyte weighing

¹ This Fig. 43 illustrates, by a drawing from the paper impressed copy of Fig. 42, an ancient Zapoteco, polished, engraved, stone ornament, found in the valley of Oaxaca. The material is one of the varieties of hard, light, green stones, or jadites, which are known to the natives under the general term "chalchihuite" or "chalchihuatl." The slab is perforated or drilled at its edges for use as a neck ornament. The whole surface of the stone is polished or burnished, and the summit of the relief has been rendered flat, apparently by being ground on a very smooth flat stone. Size 4 inches by 3 inches and $\frac{1}{4}$ inch thick. It is in the collection of Dr. Sologuren, of the city of Oaxaca, Mexico. The green stone faces and deities or charms of Fig. 46, the writer's collection, are all drilled as for neck wear; they are here illustrated about one-half natural size.

² An article in *La Nature*, of the issue of August 19th, 1899, from the pen of M. le Mis. de Nadaillac, pleasantly but rather imaginatively describes some similar figures, some ancient earthen piping and other relics unearthed in Oaxaca mounds by Mr. M. H. Saville, of the American Museum of Natural History, New York.

³ Fig. 56 is a photograph of a Tehuantepec Zapoteco girl, and is here placed in juxtaposition to Fig. 55, as there seems to the writer to be a survival of the ancient type of head-dress.

⁴ It must be noted that this is the middle measurement. The north side of the hall is something longer and the south side shorter, which seems to throw the western end of the room out of true.

146 lbs. to the cubic foot. Their weight, therefore, is about $4\frac{1}{2}$ tons each, or one-third more if that proportion of the pillar is in the ground (Fig. 22, Plate III). As exposed they are 10 feet 10 inches high, but are suspected by the natives to have 3 or 4 feet buried in the floor. Their girth is 9 feet 2 inches, a yard from the floor; they are, very slightly, less at the top. They are all, as far as the eye allows, of equal proportions. The floor of this hall is laid down in irregular patches of cement (Fig. 18, Plate II), which have the decided appearance of being modern work.¹ It could not be ascertained, but it is highly probable that some government in the present century ordered the ruins to be cleared and kept in repair.² The passage-way entrance, which is just opposite the portals (Fig. 12, Plate I), is only 5 feet 7 inches at the lintel (Fig. 8), but in the passage-way the height is 18 inches more, but at its exit to the patio it is again much less.

There is nothing particular, besides, to remark in this room except a niche or receptacle built midmost in the face of its north wall, westward of the passage-way entrance and opposite (about) the central portal. The bottom edge of this receptacle is 5 feet from the floor, its measurements are 2 feet $7\frac{1}{2}$ inches long, $19\frac{1}{2}$ inches high, and nearly 2 feet deep in the wall; its sides and top and bottom are formed of heavy square dressed stones. I am careful to mention this niche because there is one exactly similar to it, and in exactly similar position, relatively, in the north side of the north room of Group No. 3 (Fig. 26, Plate III). It would seem as though these receptacles served some peculiar and specific purpose, but what that purpose was it is impossible to say. In the jambs of the triple portals of the Hall of Pillars, on a line about level with the top of the portals, are found four shallow receptacles or niches (Fig. 12, Plate I) about the size of a man's skull. It is believed that these holes may have received the ends of some kind of poles or beams for portal awnings. Similar niches are found in similar positions on the jambs of the portals of the north room of Group 3 (Fig. 20, Plate II, and Fig. 26, Plate III).

There are no windows in these structures. Indeed the outer walls were pierced by no opening, embrasure, window, or door;³ only the triple central

¹ There are traces here and there, in this group, of modern plastering, brickwork, and cement patching. There are also in one room to be found, on the tops of the walls, decayed traces or remnants of wooden beams, with every indication that they are the remains of a comparatively modern roof; a roof made, perhaps, within the last sixty years.

² Such an order seems now to be perpetual, for the remains are zealously watched by the local government, as well as it is possible to do without having regular watchmen.

³ The window breach in the south face of the Hall of Pillars, east end, is modern vandal work; a poor attempt at retaining the sides of the breach has been made; at some time or another some native perhaps constructed a jacal in this corner of the hall. (Fig. 12, Plate I, and Fig. 21, Plate III.)

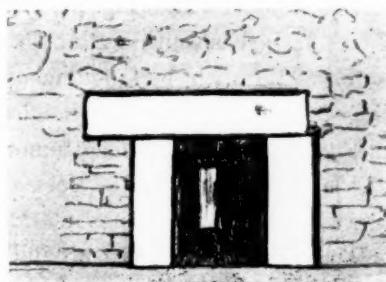


FIG. 8.

portals towards the plaza. The Hall of Pillars has three such portals in its south front, side by side centrally situated (Fig. 12, Plate I). They are rectangular. Their position and size well illustrate that irregularity of dimension which may be noted throughout the structures. The builders seem to have had no method of or correct perception of measurement. Even each of the tens of thousands of pieces of stone used in the mosaics seem to have been adjusted by trial or rule of thumb.

To continue with the rooms of this group—the patio or the *inclosed* square (Fig. 15, Plate II, and Fig. 21, Plate III) is 30 feet 4 inches east and west by 31 feet 9½ inches south and north. The four inner rooms of the square all front on the patio with rectangular entrances of slightly varying widths, the widest being 8 feet 10 inches, the height a little over 5 feet. The west room (Fig. 19, Plate II) runs the full length north and south of the west side of the square it is long and narrow, 57 feet 6 inches by 7 feet. It is the most strikingly beautiful of all the rooms at Mitla. It has three bands of grecques running horizontally without break around the room; the middle band is about 3 feet wide, and the upper and lower are somewhat narrower; each pattern is different, and they are divided on the walls by narrow courses of dressed stone. The upper portion of the walls are therefore covered with harmonious patterns of grecques in stone. The lower part of the wall is completely stripped of something, perhaps plaster of some kind, or it may be a dado of painted ornamentation.

And here a very curious and puzzling reflection arises. In this long room there is only one entrance, 5 feet high by 8 feet 10 inches wide; it is low down in a patio inclosed by high walls (Figs. 15 and 19, Plate II); it could not have admitted much light to this chamber—there is nothing very certain known about the roof of the room, but it is highly probable that it was completely roofed. To us, therefore, the futility of all this tremendous labour, expended on ornamentation that could be barely seen, seems great. We know that these builders did delight in ornamenting dark chambers.

The north and south rooms are much shorter; the north is curtailed at each end by the east and west rooms. The south is curtailed by the passage-way on its east end, and by the long west room on its west end. The east room is also curtailed by the passage-way (Fig. 8) on its south end. All these rooms and the patio sides of the walls were decorated in the same beautiful manner as the long west room, but they are not so well preserved (Figs. 15 and 19, Plate II).

As to the remaining large rooms of Group No. 2, they are in ruins and have no especial interest. The east is the least ruined—some of its larger stones are strewn around, and it still has two pillars as has been said.

Of roofs I have little to say, most that can be said must be purely conjectural. None of the rooms has a roof remaining¹ and it is a question, even, if the few beam

¹ There are no débris of roofs. The arch is entirely unknown, even the Maya, or false arch, was not used. A basement, yet to be described, has a roof of stone beams; and the passage-way of this group has a roof of similar construction. These, however, throw but little light on what the construction of the roofs was in the larger rooms.

sockets found at the top of the wall of the long room of the square are ancient, or if they were added at the instance of a protective order of a comparatively recent date. These have been recognized by some explorers as original work, and Mr. Holmes goes so far as to give a suggestion as to a probable construction of the roofs (Fig. 9), a combination of beams, rods, and light masonry.

The original heights of the walls may have been from 15 feet to 16 feet, the best preserved now stand, about, from 12 feet to 14 feet. For the thickness of the walls refer to Figs. 21 and 22, Plate III.

Other monoliths than those already described, the cylindrical pillars, are the huge lintels over the triple entrance portals, and their jambs. These lintels are easily seen, because they are of about equal thickness with the walls, in the stripped walls of the interior of the Hall of Pillars (Fig. 18, Plate II), and in the rooms of other groups (Fig. 20, Plate II, and Fig. 26, Plate III). Those of Group 3, east room, are the largest. One I measured was 19 feet 6 inches long by 4 feet 11 inches by 3 feet $9\frac{1}{2}$ inches, and must weigh about twenty-three tons,¹ as its material has a specific gravity of 2.334 (Fig. 24, Plate III). There are others not much smaller.

Group No. 3. Leaving Group No. 2 by the south-west corner of its main plaza Group No. 3 is close at hand, within a few yards, and is approached at its north-east corner. The general outline much resembles, in form, the outline of Group No. 2, except that it lacks an annex such as the north square, and consequently it also lacks an outlet similar to the passage-way of the Hall of Pillars of that group. Mounds, walls, rooms, and ornamentation too have the same construction. There is the same receptacle midmost in the north wall of its north room (Fig. 26, Plate III). The same triple rectangular portals (Fig. 20, Plate II, and Fig. 26, Plate III). Its east and west rooms were the more important in point of size. Its north room, for instance, was only one quarter the area of the Hall of Pillars, the north room of Group 2; its south room is a counterpart of the north, but the east room falls little short of the Hall of Pillars, and is in fair preservation. It has no pillars, but it has the largest monoliths in its portals that are found at Mitla. It was finely ornamented with panels of mosaics. Its corresponding flanking west room is in total ruins.

This Group No. 3 possesses, however, one especial point of interest peculiar to itself—the semi-subterranean chamber or basement (Fig. 20, Plate II, and Figs. 25 and 26, Plate III) in the mound foundation, and underneath the portals of the

That is to say, 363 cubic feet at 145 $\frac{1}{2}$ lbs. = 23 tons, 16 cwt.

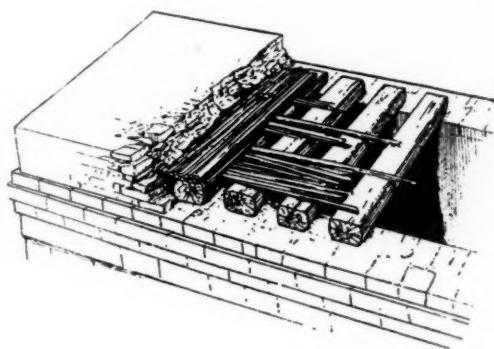


FIG. 9. (After Mr. W. H. Holmes.)

north room of the group. The chamber itself is in good preservation, but evidence as to the original entrance is obscure. Entrance is now made to it immediately underneath the central portal. It is a question if this was the original entrance. The present entrance seems to be a continuation on a higher level of a subterranean approach from the south, perhaps the centre of the plaza. There is a parallelopiped lintel over the present entrance, but there is also one about 2 feet lower in the foreground, and over the ruins of the approach. Upon entering, one is confronted by a cylindrical pillar 6 feet high, an assistance to the support of part of the roof. The chamber is in the form of a cross (Fig. 25, Plate III), and this pillar stands at the intersection of the galleries or recesses. Passing the pillar, there is a recess about $13\frac{1}{2}$ feet, north and east and west there is a similar recess or gallery for 19 feet each way. These recesses vary in width somewhat, a little over 5 feet is the general measurement. Their height is 6 feet. The walls are decorated by oblong spaces of grecques of the same general character as those in the rooms above-ground, yet there must have always been total darkness in this chamber. The roof is formed of massive beams of stone. Among some ruins at the Hacienda Zaaxás about $2\frac{1}{2}$ miles south-east from Mitla, a very similar chamber has been discovered.¹ It also is cruciform, but its panels of grecques are carved and coated, and not mosaics as those of Mitla.

The portals above this chamber entrance are fine specimens of the architecture

¹ The Mitla groups are, of course, the most important ancient remains of this part of the country or of the State of Oaxaca, but there are other minor groups and individual remains scattered in the neighbourhood of Mitla not to speak of the rather extensive groups resembling the Mitla remains—Guí-y-baa near the town of Tlacolula where the old trail south branches to Mitla. Mitla, it will be remembered, is Lyo-baa. The following are extracts from the letters of an American civil engineer, Mr. A. M. Steger, who was aware that the present writer had been interested in Mitla. They will help to illustrate the fact that the neighbouring country was once the home of a race of some culture, at least, a race far removed from the lower stratum of barbarism.

"About two miles and a half south-east of the ruins of Mitla is the Hacienda Zaaxás (mentioned as 'Saga' by Ober and others). Some twenty years ago there was discovered there a subterranean chamber in the form of a cross." (Probably a semi-subterranean basement in a mound as in Group No. 3.) "The house of the Hacienda had been built over the chamber, the builders not suspecting the presence of the latter. The walls of this cruciform chamber are made of huge stones profusely *carved* with grecques resembling those at Mitla, but they are not composed of small stones as at Mitla. One peculiarity of this carving is that it has on it a thin stucco or finish, similar to that we put on our own ceilings and walls. It is white and smooth, even burnished and shiny to-day, after hundreds of years of exposure to dampness naturally found in such a place. The tomb, for tomb it was, was very narrow, about 3 feet wide. It is 6 feet high and the arms about 15 to 20 feet each. Three skeletons, it is said, were found there when the room was discovered. It was found by a servant who saw phosphorescent light coming up through a crack.

"At another place in the mountains, about five miles east of Mitla, are found other similar subterranean structures and some remains, not extensive, but similar to other Mitla remains, all carved as grecques but no mosaics, that is no small stones.

"On the top of one of the mountains are found an unfinished structure and a quarry near by having unfinished dressed stones in it, evidently intended for the structure a few feet from it."

of Mitla. The huge lintels are uncarved and there is reason to believe they were decorated with paintings at one time. The jambs are very massive and the whole is certainly imposing in appearance. (Fig. 26, Plate III.)

Group No. 4. About 200 yards to the south-east of No. 3, the last of the palacio groups is reached. It is not necessary to enter into a detailed description of this group. It is much ruined. It resembles in scheme the church group, (No. 1), in that it was built upon the level ground with no mounds, and that it consisted of a sequence of squares. The squares in this group, though, did not pursue a north and south line as in Group 1, but the south square was placed to the westward of the other two (Fig. 1, Group 4). This group seems to have been used systematically as a quarry and only the weight of some of the lintels, in some parts, has prevented a further spoliation.

Group No. 5. Teocalli. (Fig. 1, Group 5.) Passing from Group 4, north about 125 yards, the south-east corner of the main pyramid, called Calvario, is reached. This group is of an entirely different type of erection to those just considered. On circling the group, a first casual view shows a large truncated pyramidal mound about 35 feet high and with a rectangular base and smaller rectangular summit, whose ends and sides are parallel with the ends and sides of Palacio Groups Nos. 2 and 3, which are now 225 yards to our eastward; that at the western side of this pyramid there is a level court, space or plaza bounded on the remaining three sides, west, north, and south, by oblong, low, truncated, pyramidal mounds. Upon more particular examination, although the lines are disintegrated by the weather and age and the slopes overgrown with brush, the observer is struck by the fact that no two faces of the pyramid are alike or have the same angles of inclination. The western side, which fronts the court, immediately shows to be an almost vertical two step descent from the top, the lower step being an almost perpendicular 15 feet. 41 feet from the centre of the base of this western face (west) out in the space or plaza is a large irregular shaped boulder 4 feet high and 6 to 8 feet through, with a fairly flat top; 135 feet further is the smaller mound of the western limit of the court and still further beyond (west of this), 65 feet, there is found another heavy boulder partly buried in the ground; its top is, roughly, an inclined plane about 9 feet by $6\frac{1}{2}$ feet. Its weight would be at least 15 tons. These boulders have every appearance of being placed there to serve some use as table, platform, or altar. The smaller mounds are being fast obliterated. They were of adobe. Returning to the main pyramid; the mid portion of its eastern slope is occupied (30 feet at the base but lessening as ascent is made) by two flights of stairs or stone steps, 37 steps in all, 20 steps reach a wide step or platform 9 feet wide, and then 17 steps reach the door of the "Calvario" chapel on its summit; this is all modern. In spite of this rough usage and of the disintegration of this Teocalli there are evidences that it had a well conceived design and that it must have been at one time a really handsomely finished structure, doing credit to the other erections and not a mere shapeless mound. In the upper part, courses of oblong adobe bricks are seen, otherwise a

filling of adobe rubble and stone was used in its construction. How it was faced and finished or what occupied its summit is a question.

Group No. 6 (Fig. 1, Group 6). About 500 yards to the south-east of the pyramid group just described is another similar pyramid group. Group No. 6 resembles Group No. 5, in so far as it has a large main eastern pyramid with three smaller truncated pyramidal mounds inclosing a space or plaza beyond its western face; it is also similar in its material and manner of construction. Adobe bricks are not well defined in courses, and the design or outline seems to have been different and more complex. The base of the main pyramid is quadrilateral but not rectangular, measuring on its western side, which was, perhaps, its more important side, 152 feet, its north side but 92 feet, its east side 111 feet, its south 131 feet. Its summit seems to have been of peculiar shape, having small quadrilaterals at its own corners; its own corners being cut off by them. The mean measurements of its summit would be about 60 feet by 80 feet. The summit and different levels in this pyramid were paved with a very hard and durable cement finished with a smooth plaster painted red; a sample of the plaster is on the table. Only vestiges of these cement platforms remain, but large masses of it are lying here and there, and some of it *in situ*. The form of this pyramid must have been quite complex for it is apparent that these platforms were on different levels on each face of the pyramid, and each face had a different angle of ascent. I cannot think it was a symmetrical structure. The height of this pyramid is 30 feet, and ascent seems to have been made in one, two and three steps on different sides or faces. It is now much overgrown with scrub and brush. On its summit there remain evidences of some small structure, I believe of some comparatively modern building.

Of the three truncated pyramidal mounds the south and west are merely irregular heaps of débris or rubble covered with brush and prickly scrub. The exact size of the plaza cannot, therefore, be given. East and west it was a little over 100 feet. North and south it was perhaps 130 feet. Somewhat north-east of the centre of the plaza are square-sided remains of adobe in large slabs. Whether this is a modern building of mound remains or a ruined ancient structure is doubtful. The north mound is in better preservation, and seems to have been much the larger of the side mounds; it is 86½ feet east and west, and 42½ feet north and south. It has on its summit, which is 39 feet long east and west, and rather narrow, some badly ruined remains of oblong adobe rooms which are partitioned but seem to have been windowless and doorless. This completes the description of Mitla proper.

Group No. 7 (Fig. 10).¹ There is, however, one other interesting remain that must be examined, the rough fortifications crowning the top of the acropolis-like hill west of the main Mitla ruins. If we return to the western pyramid Group

¹ The outlines and contours of Fig. 10 are not scientifically exact, as the writer lacked suitable instruments for this class of survey. They are as nearly accurate as careful drawing and many measurements could make them.

No. 5, and measure from the north-east corner of the Teocalli, in line with the north side of the Teocalli, to a point at the base of the hill just below the north extremity of the double walled entrance, the distance is 1,722 yards, 38 yards less than a mile. The slope of the hill at this point is about 35° and up to the wall is approximately 330 yards. The circumference of the base of the hill, which is ovoid, is about $1\frac{1}{2}$ miles, but this was not measured. The crown of the hill is at its north end. On the south side especially and on the south-east side the slope is comparatively gradual. On the south side the only obstacles to an easy ascent are the very numerous large boulders. Around towards the north it begins to be precipitous, and on the north-west and west the hill is a formidable-looking fortress; the perpendicular cliff which rises out of the plain below is fully 600 or 700 feet high.

Around the south and south-east sides only, therefore, did the ancient fortifiers deem it pregnable to such a degree as to require a double wall to defend

the crown.
Here, too
the wall is
built much
h i g h e r.
The double
portion is
in the form
of an L,

an enclosing angle, and the entrance at the outer wall is at a different point to the entrance at the inner wall. The height and strength of the wall is made proportionate to the danger it was estimated it might be exposed to. Where the hill is precipitous and high the wall is low and insignificant, not more than 5 feet or 6 feet thick. At vulnerable points the wall is higher, up to nearly 20 feet high, and stronger, with massive and big stones, and its thickness fully 10 feet. The course of the wall takes advantage of all natural helps towards strength, such as gullies, notches in the cliffs, or juttings out of the crown, so that the wall zigzags and turns with many meanderings.

The enclosure is very rough and uneven, and by reason of its irregularity of outline only an approximate idea of the size of the enclosure can be given. It is



FIG. 10.

about 12 acres. The double walled L shape enclosure is about 110 yards long and about 30 feet wide, varying. This includes both legs of the L.

The adobe structures in this enclosure were probably shelters. The principal one is just within and to the north-west of the double walled portion. It is on some of the higher ground and can be plainly seen from the main Mitla groups. Some scraps of old pottery and clay casts are to be found for the seeking. One at least of the great boulders within walls has, scooped out on its top, a well formed bowl about 2 feet in diameter. Fig. 39, Plate V, is a reproduction of a rough pencil sketch of this hill and fort from a point easterly of them.

It remains but to speak of those relics not already mentioned in my communication. Fig. 40, Plate V, is a collection of arrow-heads and cores, mostly of obsidian, from Mitla and the Valley of Oaxaca. Fig. 41, Plate V, represents stone lance-heads in Dr. Sologuren's collection, Oaxaca. The scale shows them to be of large size. Fig. 42, Plate VI, besides the paper impressed copy, already described, shows the various forms of green and grey stone beads found and obtained at Mitla. Fig. 44, Plate VI, shows one copper chisel, and, besides, drawings of flanged copper axe currency of various sizes in Dr. Sologuren's collection. Fig. 45, Plate VI, shows two specimens of the same currency that I found and obtained in Mitla pueblo. Descriptions of this peculiar kind of currency and of its development from an article of real value to a symbol of value may be found in Professor William Ridgeway's recent edition of his *Origin of Metallic Currency*. The first article on this Fig. 45 is probably a grinder of some kind; the second a grey clay plate typical of the ancient pottery; the third probably a bark beater; the last a light copper chisel of peculiar, almost modern type, yet of copper. This figure is about one-seventh natural size. Fig. 47, Plate VII, are Mitla and Oaxaca Valley implements and two small axe-shaped ornaments, all of green stones. The first is an axe-head of a type rather foreign, I should say, to this district; the next a dark green stone hammer; the next a dark green stone chisel; the two next well formed green stone axes; the next a light axe and hammer; the next the broken tip of a chisel or axe; all these are about one-fifth natural size. Fig. 50, Plate VII, illustrates a little baked clay bowl. I do not know for what purpose they were used. It has been suggested that they were for holding small dabs of paint. I found them in the rooms of the ruins and around the buildings at Mitla. Most of them are rudely ornamented, some with triple points and others with a meandering snake. They are illustrated at about one-fourth the natural size.

My visit to Mitla was in the autumn of 1891.

DISCUSSION.

After congratulating Mr. Corner on his interesting paper, Mr. MAUDSLAY said that the peculiar mosaic ornament of Mitla appeared to be confined to Oaxaca, and was not, so far as he knew, ever met with in the northern part of Mexico, nor in the buildings in the neighbourhood of the Rio Usumacinta, but it again made its appearance in the rains found in the north of Yucatan.

After noticing the comfortable old method of classing everything in Mexico not easily intelligible as the work of the Toltecs, Mr. Maudslay compared Dr. Brinton's depreciation of that people with Mr. Payne's statement that the Toltecs were the originators of Maya culture. Both writers, he suggested, may have placed too much reliance on arguments based on language and tradition, and an actual examination of the ancient remains must decide the difference between them.

Mr. Maudslay then discussed the position of the Mexican and Maya races at the time of the Spanish invasion, and taking the Isthmus of Tehuantepec as a dividing line, noted the overlapping of the Nalma races on the Pacific side as far as Nicaragua, and the existence of a Maya people, the Huastecas of the Rio Panuco, on the western side of the line. After referring to the Spanish descriptions of Mexican buildings and noting the uncertain origin of such buildings as those at Cholula and Teotihuacan, he described some of the ruins found to the east of Tehuantepec, contrasting the remains of the Maya-Quiché towns, such as Utatlan, Iximché, and Chacujal, which were living towns at the time of the Spanish invasion, with the great ruins in the valleys of the Usumacinta and Motagua rivers, such as Copan, Palenque, and Menché, which he believed to have been abandoned and lost to sight long before the Spaniards arrived on the scene. Turning to the north of Yucatan, it was, he said, much more difficult to ascertain which of the great groups of ruins had been definitely abandoned before the Spanish invasion, but with regard to Chichén Itzá, which was the only ruin in Yucatan which he had personally examined with much care, he placed very little reliance in the story that the Spaniards had found it a living city, and was driven to the conclusion that it had been deserted by its inhabitants some time before their arrival, although its ancient shrines were still held in reverence and probably served as places of pilgrimage.

Although in no way competent to speak on the difficult subject of American traditions, the frequent assertion of the tendency of migration from north to south and the Toltec origin of American culture could not fail to impress him. If there were formerly a race of cultured people in Mexico associated with the name Toltec (= builders), who were driven out of the country by the incursion of Nahuatl hordes, he could well believe not only that they very considerably modified the rude culture and arts of their conquerors in Mexico, but also that in their new homes to the east of Tehuantepec they became the founders of Palenque and Copan, but in this case the Toltecs must have been a Maya and not a Nahuatl race, and this would bring us into conflict with the early Spanish writers, who assert that the Toltecs spoke a Nahuatl language.

On the other hand, if the Toltec theory were abandoned, and Cholula and Teotihuacan were admitted to be the work of Nahuatl tribes, then we seem to be driven to credit a spontaneous origin of Maya culture in the land where the great Maya remains are now found. For his own part he would gladly welcome evidence that the Toltecs and the Mayas were the same people—a peaceful race who, after spreading over Mexico, were driven by the invading Nahuatls from that country to Central America, where they made still further progress in civilisation, marked by the development of the peculiar script with which their monuments and the walls of their temples are covered; that later on they suffered defeat at

the hands of their enemies, and were forced to abandon the great cities on the Motagua and Usumacinta, and seek safety in the north of Yucatan.

At Copan and Palenque no weapons of war are to be seen depicted on the carved stone. At Chichén Itzá every man is drawn as a warrior with atlatl and spears in his hands. Defeat and migration not only forced the Mayas to become a warlike people, but it had a marked effect on their art. The buildings of Yucatan were larger and more pretentious than those to the south, but the delicacy of the carving had vanished, and over all is an indefinable Nalma flavour. It is, however, in these buildings of Northern Yucatan that the stone mosaic work of which Mr. Corner had given such an excellent account was again conspicuous, but it had lost the simplicity of form which characterised the designs at Mitla. It seemed to him worth consideration whether the same cause which had effected the abandonment of Palenque and Copan had not acted also at Mitla, and that Northern Yucatan had become the refuge of more than one defeated race. Indeed, at Chichén Itzá there were evidences which could not be ignored of a third race, but one of the Maya stock.

It is generally admitted that the Huastecas, a people inhabiting the valley of the Rio Panuco (a river which flows into the Gulf of Mexico at Tonupico), belong to the Maya stock. Dr. Brinton, although he will not admit the word Toltec to be a tribal designation, says of the Huastecas that they may be regarded as one of the tribes left behind in the general migration southwards. The term Toltec, he says, was probably applied to the small town of Tula, north of the Valley of Mexico. Mr. Maudslay pointed out that this town of Tula was situated on the head waters of the Rio Panuco, and that the ruins which had been found there confirmed the correctness of the account given by Padre Sahagun of the temple at Tula dedicated to Quetzalcoatl, which was supported by columns in the form of rattlesnakes, with the head of the snake at the base and the rattle at the summit. Mr. Maudslay then showed some photographs of similar columns from buildings at Chichén Itzá, and suggested that the peculiar form of column may have been carried by the Huastecas and their neighbours from the mouth of the Rio Panuco across the gulf to the north of Yucatan, and that this would account for the form not occurring anywhere in Mexico to the south of Tula. Such a migration, or some close commercial connection between Yucatan and the Rio Panuco, might partly account for the Nahuatl flavour of the sculptures in Chichén Itzá, for the Huastecas who were left behind in Mexico for so many years must have been greatly influenced by their powerful Nalma neighbours by the time they again came into connection with the other branch of their race. It also seems possible that a migration across the gulf from the Rio Panuco to Yucatan, carrying with it the art of Tula, may have revived and become mixed with the earlier traditions of that great exodus which originally carried the building race from their old homes in Mexico to the east of the Isthmus of Tehuantepec.

Colonel GEORGE EARL CHURCH.—Unexpectedly called upon, at this late hour to comment on Mr. Corner's interesting and very instructive paper, I scarcely know how to crowd into a few words the numberless thoughts which arise regarding the people who left to our wonderment the ruins of Mitla. Unfortunately, the student of tribal and racial development in the New World, prior to its discovery, always has to grope in a darkened field for historic fact;

and even what little truth he can fish from the turbid wave of Spanish conquest and domination is not always satisfactory. That several similar phases of so-called indigenous civilisation sprang up in Mexico and Central America long prior to the Spanish conquest we have evidences in the numerous groups of vast and imposing ruins, the hieroglyphic riddles of which we hope are being solved by our friend Mr. Maudslay, whose valuable remarks on the paper we have been listening to have preceded mine. One of his observations was, "There is evidence that Mexico was always open to invasions from the north." I make no doubt that such invasions were numerous and at times irresistible.

Failing in quest of historic fact or substantial tradition, one is thrown back upon the general knowledge which has been garnered from other fields regarding the rise of man from the savage to the barbaric status, and then his upward struggle to civilisation; and if to this we add what we have learned of the traces which he has left behind him in Mexico and Central America, we may form some idea of the habits, customs and government of the people who, perhaps for a long period of centuries prior to the Spanish invasion, were evolving that growth towards civilisation which their European conquerors so mercilessly obliterated. The food supplies indigenous to Mexico, notably maize, caused the formation of agricultural communities, the most powerful of which had its habitat in Anahuac, and ultimately, by its growth, wealth and power, dominated all the outlying, poorer and weaker tribes. The result was the constitution of a kind of feudal system which readily lent itself to extension southward, until it included a greater part of all the present Central American states and the establishment therein of petty princes or of feudal lords, who enslaved all the weak tribes and forced them to build the gigantic defensive and religious edifices the ruins of which are now so attractive to explorers. A land so filled with wealth, comparative comfort and abundant food supplies offered the same inducements to the hunting hordes of nomad, savage Athapascans and Sioux, who occupied the country to the west and north-west of the Mississippi river, as the smiling fields of Lombardy presented to the migrating masses of hungry barbarians who looked down upon them through the passes of the Alps in the early centuries of our era. The result in Mexico was similar; invasion followed invasion, pressed on by still hungrier hordes from the rear, giving the land no rest. It is a curious fact that these conditions have ruled even until our day. When Cortez invaded Mexico the Ilaxcaltees made common cause with him against their exacting masters the Aztecs, for which service the Spaniards conceded to them special *fueros* or privileges. Towards the end of the sixteenth century, a large part of the tribe were entrusted with the defence of the northern frontier of Mexico, the main body being stationed near San Luis Potosi with outposts in Coabuila, against the ceaseless savage inroads from the north. Their chief told me, in 1867, that their *fueros* had been respected by the Mexican Government since the independence of the country from Spain. Throughout the Spanish rule the tribes from the north still raided southward, especially the Comanches and Apaches, and desolated province after province. In 1866 I was in Mexico, and while riding, with two companions and four servants, from Monterey to Chihuahua, we happened to strike the line of march of a powerful body of Apache savages who were laying waste north-eastern Durango. We had a three-days' running

fight, during which period of time the Apaches killed 126 peaceable Mexicans along our route.

If, even during the whole period of Spanish rule in Mexico, the country was considered a land of promise and plunder for the more northern races, how much more so it must have been in Toltec, Maya and Aztec days, and how certainly these people in turn, under pressure from the north, must have had their racial expansion towards the south, and have overrun, conquered and feudalised the weaker, disjointed Central American tribes and forced them into servitude, to create wealth and comfort for their barbarous taskmasters and build those edifices, examples of which have been shown us this evening, and which are the silent and deserted symbols of serfdom.

ORDINARY MEETING.

APRIL 25TH, 1899.

WM. GOWLAND, F.C.S., *in the Chair.*

The Minutes of the last Meeting were read and passed.

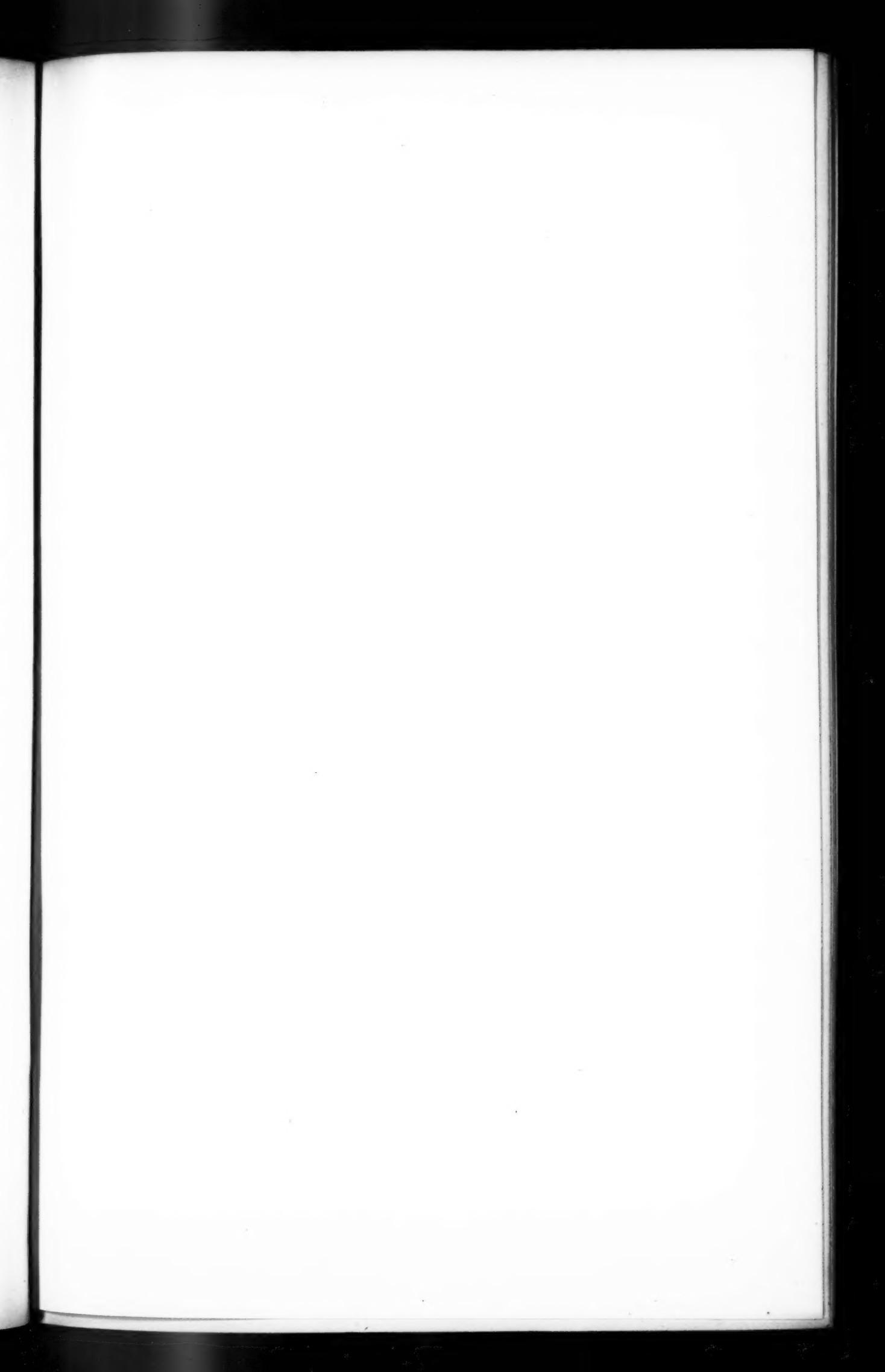
The CHAIRMAN introduced LE COMTE C. DE CARDI, who proceeded to read his paper on "Ju-Ju Laws and Customs of the Niger Delta." This was illustrated by lantern slides and a collection of objects from West Africa.

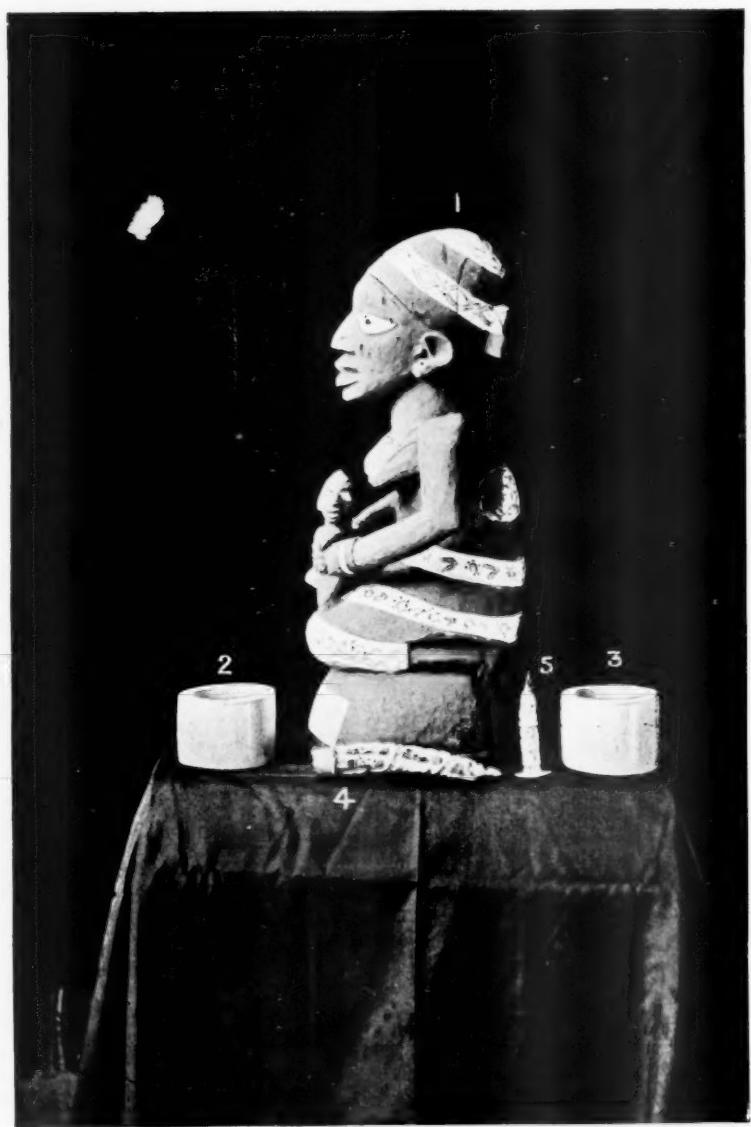
Mr. T. J. ALLDIDGE also exhibited a series of lantern slides of views in the colony of Sierra Leone and the Protectorate.

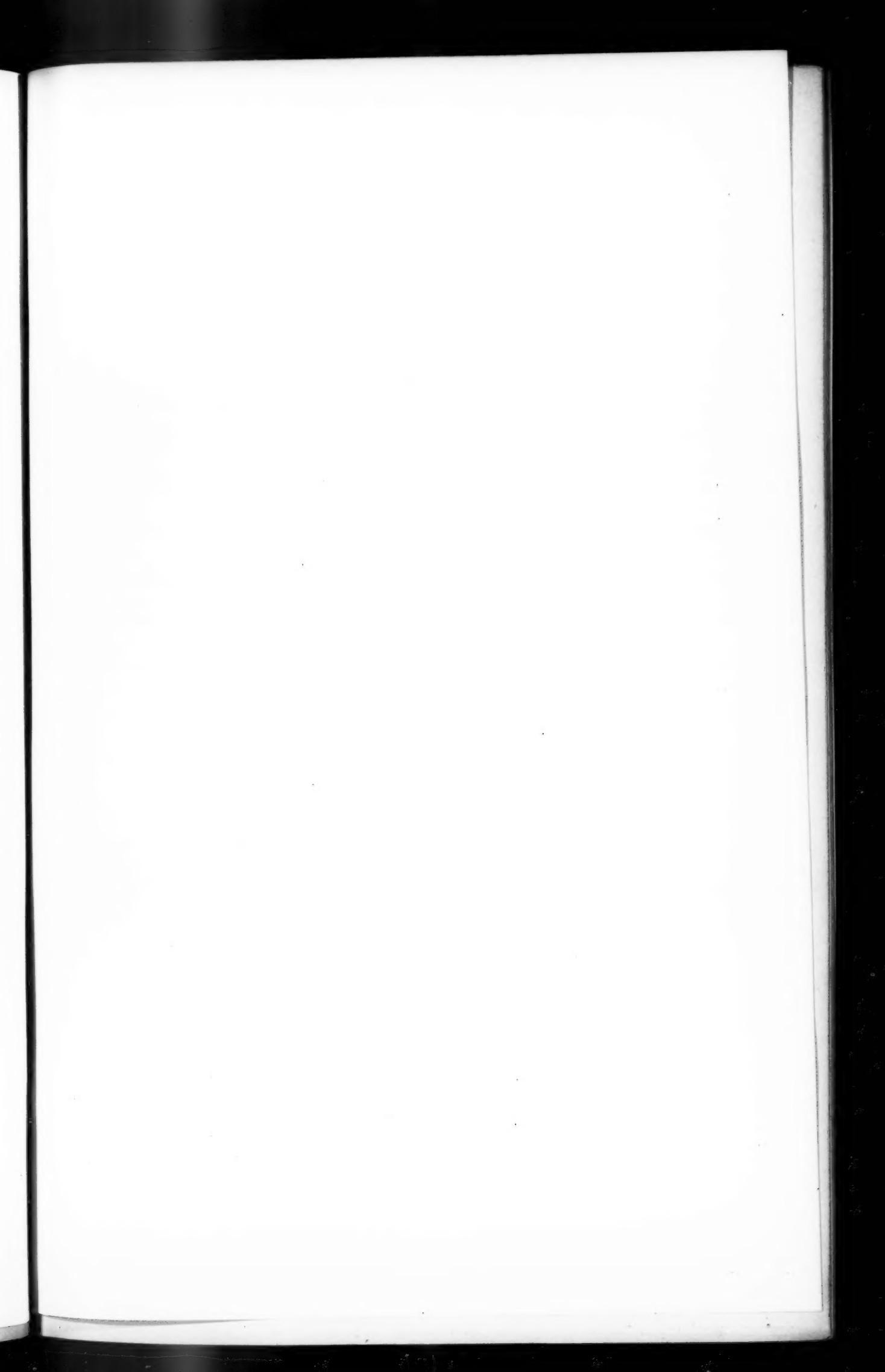
The CHAIRMAN invited discussion on the excellent paper of Comte de Cardi and the very interesting description of his slides given by Mr. Alldridge.

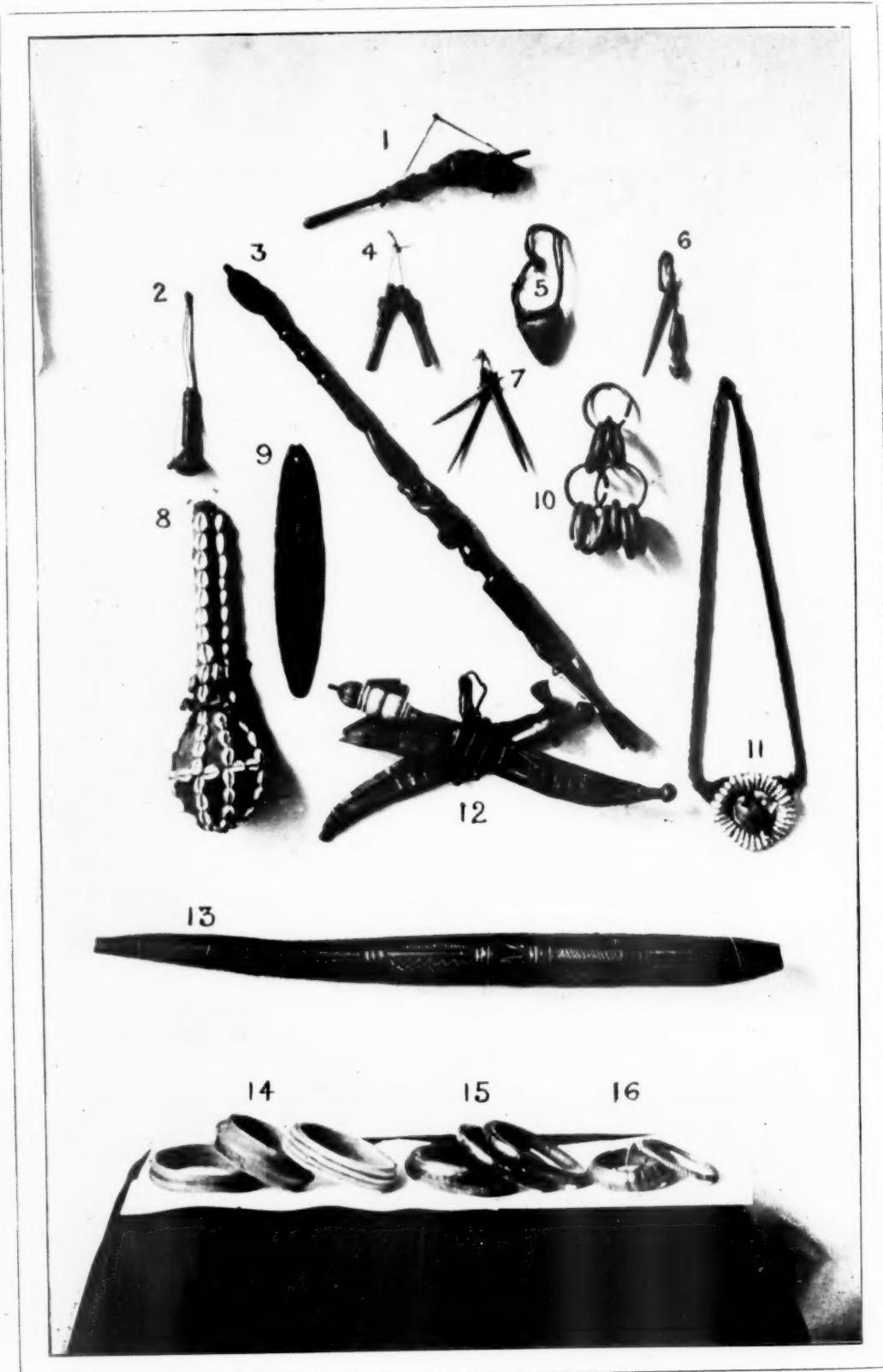
Miss KINGSLEY handed in her notes on some portions of the Count's paper, and Mrs. FRENCH SHELDON, Mr. R. B. HOLT, Colonel R. C. TEMPLE, Rev. H. N. HUTCHINSON, Dr. BENNETT, and others continued the discussion.

The Lecturer replied to many of the questions asked, and the CHAIRMAN closed the proceedings with a vote of thanks to Comte de Cardi and to Mr. Alldridge for their valuable contributions to the study of West African life.









JU-JU LAWS AND CUSTOMS IN THE NIGER DELTA.

BY LE COMTE C. N. DE CARDI.¹

[WITH PLATES VIII AND IX.]

BEFORE I commence my paper I would like to impress upon my audience that I am neither an anthropologist nor an ethnologist in the scientific meaning of those terms. I am simply a man who has visited Western Africa on many occasions and resided there a considerable length of time. During my visits I have collected a number of facts about the negro people of Western Africa, and I willingly describe them to the best of my ability, so that real anthropologists and ethnologists can make use of my notes for the better understanding of the human race in general, and the negro race in particular.

Ju-Juism.—I use this term in preference to Fetishism when speaking of the religion of the inhabitants of the Niger Delta, because the word *Ju-Ju* is usually made use of by the people of the Delta who are most in touch with Europeans.

During my many years' residence in Western Africa, principally in the Niger Delta, I have had many long and to me very interesting conversations with the Ju-Ju priests, many of whom I have found to be most intelligent men, though other travellers and writers have generally described these men in a very different manner ; in most cases describing them as hideous looking and degraded monsters in human form.

One of the most intelligent Ju-Ju men I ever met with was a very old man named *Quākery* the Ju-Ju King of New Calabar, who ranked above the King in all purely native palavers, religious or civil, his opinion always carrying great weight. This man went farther in his explanations of native customs to me than any others with whom I came in contact, pointing out to me the great assistance Ju-Ju was in ruling the country. "For example," said he, "suppose your house was broken into and robbed, and you went to the King of my country and complained, he could not find out who had robbed you if the thieves had not been seen by some of the townspeople who were willing to give information to him. The King would do his best to find them out by sending messengers round to all his chiefs that you had been robbed, and that they must see if any of their people were the culprits ; but that order would have little effect with the bad characters of the town, because it emanated from the King, who is a man like themselves, and from whom they would steal if they got the chance. But if I sent round a notice that, if the thieves did not immediately bring me the stolen articles my Ju-Ju

¹ Some portions of this paper were read before the British Association for the Advancement of Science at Bristol, September 7-14th, 1898.

would cause them (the thieves) to swell up and burst, you would see how quickly they would come to me and deliver up the stolen goods."

To further illustrate the good uses of Ju-Ju, my friend Quākery continued by saying, "During the many years you have been in my country have you ever seen a native woman put her foot on board a white man's ship?" I replied that as a matter of fact I never had. He then went on to tell me that "many, many years ago when the white men first came to his country native women had been allowed to go on board the white traders' ships, but that this custom had led to many serious troubles, and it had been decided by the former kings and chiefs that the Ju-Ju should make a solemn law to the effect that in future no native woman should be allowed to go on board a white trader's ship," and this law was never broken up to my last visit to New Calabar so far as I know, though advanced ideas were beginning to undermine the power of the Ju-Ju King. The above law concerning women I only met with in New Calabar.

Having described some of the uses of ju-juism I will now describe some of the abuses. In the hinterland of the Niger Delta is to be found the Ibo or Eboe tribe, whose country extends from the Yoruba borderland on the west, to the Ibibio country on the east. The Ibo or Eboe people have almost identical forms and customs of ju-juism with the coast tribes; this is not to be wondered at as the latter are mostly offshoots from the great Ibo or Eboe family.

In the Ibo country is found Long Ju-Ju, the abode of the most powerful Ju-Ju in this part of the country. In 1896 Major A. C. Leonard of the Niger Coast Protectorate Service, succeeded in getting to the town of Bendé, a town supposed to be situated within about thirty miles of the Great Fetish or the Long Ju-Ju of the coast tribes. I mention this fact as I consider Major Leonard's journey to be a great achievement, and that it will eventually lead to immense results commercially; also it will be the means at no distant date of giving to the world some very interesting and curious information about the practices of the Ju-Ju priests of this mysterious stronghold of native religion.

This is the great oracle of all the tribes dwelling in the Niger Delta; to it all family disputes are referred, and its decision is recognised as final; it is also appealed to, to decide the guilt or innocence in cases where a man of position has been accused of murder, witchcraft or poisoning.

The Long Ju-Ju was appealed to in olden days by tribes dwelling as far away as Lagos, and even some distance to the westward of that place; at the present day natives dwelling in the neighbourhood of Lagos still consult this oracle.

Human sacrifices are not made to this Ju-Ju after the manner of the sacrificial rights practised in Ashanti, Dahomey, and Benin. Still a certain amount of slaughtering of human beings goes on at the Long Ju-Ju to this day, for when two men go to Long Ju-Ju for the settlement of any dispute between them, it is customary for the losing party to be destroyed by its power; but in many cases to my certain knowledge the priests have found it much more remunerative to sell the losing litigant into slavery, for I have met with

and conversed with men whom I have known to have visited the Long Ju-Ju, and who were supposed to have been killed by it. Whenever I have spoken to these men they never expressed a desire to return to their own country, with one exception; all the others being satisfied that their own people would never acknowledge they were anything else but spirits. The one exception was a man that I picked up in Old Calabar, having known him well in his own country before he went to Long Ju-Ju. I tried all I could to get his people to receive him back amongst them, but when I told them that I had actually got him on board my ship, then lying a few miles from their town, the whole populace seemed to rise as one man, and I was soon surrounded by a howling mob of infuriated savages, who were only appeased by my promising to take the man away from their river the next morning. On my return I found that none of the natives would come on board my ship, and on inquiry from the head Ju-Ju man of the town, I found that they considered the ship defiled by my having had the spirit of a man from Long Ju-Ju on board. As this took place long before the advent of the British Protectorate there was only one thing to be done, and that was to make a suitable present to the Ju-Ju King and get him to come on board my ship and make ju-ju: this he did, and then declared my ship free from all the evil effects of the malignant spirit I had had on board. But the King of the country was not going without his share of the plunder, so I had to make him a suitable present also, and invite him to breakfast on board, so that by his presence his people might see that all fear of evil consequences was at an end, as both the spiritual and temporal rulers of the country had visited my vessel.

This case of defilement reminds me that amongst these people, and especially amongst the *Ibos* and the *Ibibios*, anyone touching a corpse is defiled, and must go through a purification. The earth from a grave also defiles.

Many of the funeral customs of the Delta natives are curious and interesting; for instance, the wives and female mourners for a person of distinction must sit on the floor of the room where the person died, no seat being allowed them. They are not permitted to wash until the allotted time of mourning is over, which in some tribes continues for upwards of two weeks, nor are they allowed to change their apparel during this time. They must also, especially the wives, shave their heads.

Another curious custom observed by many of the Delta tribes is that of preparing a monster feast to be eaten after the interment of a chief or man of any distinction. To this feast are invited all the principal men of the town, and in the case of a coast town any white traders who may be in the country. At these feasts all the best crockery and glassware of the defunct is ostentatiously displayed and crowded on to the dinner table at the commencement of the repast; but an observant guest would notice that the attendants, once the guests are seated, commence as opportunity offers to replace every plate, dish, and glass, by the most common article of the same kind they can find in the house. The reason for this is that custom decrees that every article used at one of these dinners must be broken up and destroyed.

The yearly festival of father-making, practised more or less by all the pagan tribes of Western Africa, is very strictly observed by the natives of the Niger Delta. It is to this worship of ancestors that the West African mostly owes his bad character for human sacrifices, for this custom and the funeral custom of despatching a number of dead chief's wives and slaves with the defunct to wait upon him in the next world are the chief occasions when human sacrifices are made.

The custom of annually sacrificing a number of slaves at a chief's father-making to take messages from the living to the dead would mean in a town of 5,000 to 6,000 inhabitants a yearly sacrifice of at least sixty souls, but this estimate would be largely exceeded in a city like Benin. Incorrigible thieves, murderers, and other malefactors were generally reserved for this purpose, but when the supply of these ran short, slaves would be purchased for the occasion, or a special raid on some neighbouring people would be organised.

There are certain other sacrifices such as the Bonnymen's sacrifice to the protecting spirit of the river, to whom a sacrifice was at one time annually made of a very light copper-coloured slave girl. These girls were always procured from a tribe of Ibos or Ebos inhabiting a country away in the hinterland of New Calabar. Some writers have reported these as Albinoes; this is not the case. This custom of propitiating the river deity by the sacrifice of a copper-coloured girl, in some rivers an Albino, was common to all the river-side tribes of the Niger Delta, and I am afraid is still practised in the British Protectorate. Also from what I was able to learn, all of the different river gods in the Delta could only be appealed to through the medium of one of these tawny coloured Ibo girls (from this one tribe), or as I have before stated in some cases by an Albino girl, but these latter were never sacrificed by the Bonnymen to my knowledge.

I have seen it stated that a slave bought for sacrificial purposes by the Bonnymen would not be sacrificed if he or she managed to eat any food, even so little as a few grains of corn belonging to the Bonnymen, in the interval between purchase and sacrifice. I am afraid this statement is not true, or the inquirer did not get a very lucid explanation of the rule which governs this native custom, or it may be right in so far that when the victim is bought the seller is bound to supply a week's provisions, for I have known one of these unfortunate girls to be kept in a native town a full week before being sacrificed.

Knowing a little of her language, and assisted by a native boy who spoke both her language and English fluently, I interrogated this girl, and found she knew perfectly well what was going to be done with her, and she displayed no fear of her fate but rather seemed to glory in it. A peculiar custom in connection with this rite was that this girl was allowed to claim any piece of cloth or any ornament she set her eyes upon, and the native to whom it belonged was obliged to present it to her. At the time I saw her and conversed with her, she must have had at least £200 worth of coral beads hung round her neck, besides which she was clothed, or rather, I should say, nearly smothered, in many yards of costly silk damask. I cannot say whether all this finery and the coral beads are still on

her when she is plunged into the sea at the mouth of the river, or whether the Ju-Ju man has at least the coral beads so arranged around her neck, that at the supreme moment he can surreptitiously convey them to some secret wallet concealed about his person; I have a very strong opinion that the Ju-Ju man sees that so much good coral is not wasted. I have mentioned my suspicions to some of the most intelligent natives who have invariably answered me in the following words: "No, no, I beg you don't say that, our Ju-Ju priest no fit to do all same you say."

I did my utmost to save this girl from her cruel fate, but to no avail, though I offered to ransom her at five times the price that had been paid for her, the Ju-Ju man would not agree to part with her, cynically observing that there was not time to get another as the sacrifice must be made at the big water then due, *id est*, the equinoctial (September) tide.

This complete disregard for death I have frequently noticed in natives who knew they were to be sacrificed, in fact, they seemed anxious for the event. I have closely questioned many of these poor victims to see if there was any religious idea in their minds of a future state more happy than their lot on this earth, or if they expected some great reward in their future state by the mere fact of their being sacrificed to the gods; but I was never able to get any reply to my questions to indicate that their state of indifference was brought about by any religious sentiment. I therefore put it down to some kind of frenzy that takes possession of them, and renders them almost if not quite oblivious to all passing events, once they know they are to be sacrificed.

This state of frenzy and total disregard of life I have noticed to often take possession of both male and female natives of Western Africa; on many occasions I have especially noticed it amongst the women. On the deportation of a king or a chief by the British or other European government for some offence I have seen the wives of the deported man throw themselves into the river and fight like mad women with the people who went to their rescue; I have also seen some of the male retainers both free and slaves of a deported king or chief attempt their own lives at the moment when the vessel carrying away their chief disappeared from their sight. Another instance I remember was during the war between the Bonnymen and Opobomen in 1870. A Bonny youth was brought a prisoner to Opobo by some of King Ja Ja's people. Recognising the youth as one who had been my servant in Bonny, I went to Ja Ja, the then King of Opobo, and asked him to give me the boy. Upon my explaining my reasons, he very kindly said I could take him and do what I liked with him, sending one of his chiefs with me to order his people to give up the prisoner to me. When the boy heard what I had done for him, instead of being grateful, he went off into a paroxysm of abuse against me, acted like one demented, and finally began to curse King Ja Ja, saying all kinds of abusive things about the King's wives, and finishing up by accusing himself of being the murderer of one of them after having outraged her.

This was more than the crowd of Ja Ja's people could stand, and before

I knew what was happening this youth was knocked senseless and his head severed from his body.

As a further example of the callous condition of natives intended for sacrificial purposes, I must here cite another case. In all native communities of the Niger Delta a man cannot be a full chief and entitled to all the prerogatives of chieftainship without having taken off the head of at least one enemy in war, or decapitated a prisoner in cold blood. Failing either of these actions, he must on the occasion of his being made a chief, purchase a slave for the express purpose, and woe betide him if by any chance he should bungle in his task and not take the victim's head off in a workmanlike manner; for cases have come to my knowledge where the aspirant chief has failed to take the victim's head off at one stroke, so that the half decapitated wretch has had strength enough to turn his head round and curse his executioner. This unfortunate clumsiness on the part of the chief is noted by his fellow-chiefs, his wives, though not present, hear of it, and henceforth when his wives or fellow-chiefs desire to annoy him they remind him of this episode. Cases have occurred in the Niger Delta of powerful chiefs making their young sons perform this horrible head-cutting rite before they were in their teens. These children can always be recognised by their being allowed to wear a large feather in their hats, this mark of distinction being strictly the sole right of a chief. Of course all these horrible practices are now being put down by the officials of the Niger Coast Protectorate, and in Nigeria by the Royal Niger Company's officials, who are constantly engaged in stamping out these inhuman practices. In fairness to many chiefs that I have met with in the Niger Delta, I must bear witness to their wish not to carry out this disgusting and cruel ceremony; but as these practices have been handed down from time immemorial and carry with them certain emoluments for the Ju-Ju priests, as well as the occasion being seized upon by the lower orders as an excuse for feasting and dancing at the expense of the newly initiated chief, the more enlightened natives have hitherto been unable to do much towards the abolition of these horrible rites.

Circumcision is practised by many of the inhabitants of the Niger Delta, but not with any idea of its being a religious ceremony as some travellers in this part of Western Africa have reported. Amongst some of the tribes it is the sign of freedom, so that a slave who becomes a rich and influential man in a tribe where this rite is thus looked upon, must undergo the operation or stand the taunts and reproaches hurled at him by the female portion of his establishment on any slight provocation. When a freeborn chief of the same tribe wishes to be particularly severe on his parvenu fellow-chief, he hurls the word "*pellégá*" at him, with a strong emphasis on the last syllable, as being his final swear-word and the expression of his utter contempt for him.

The peculiar fact that the rite means one thing in one tribe and just the opposite in another is singularly well demonstrated by the case of the New Calabar and Bonnymen, the distance between the chief towns of these two tribes not exceeding fifteen miles as the crow flies; yet in the former not to be circumcised is

the sign of slavery, whilst in the latter the opposite rule holds good and the word of reproach is *pellum*. These two words *pellégá* (uncircumcised) and *pellum* (circumcised) being the same in both the Bonny and New Calabar dialects are very favourite curse-words of all classes and ages of both tribes.

NATIVE CURSE-WORDS AND STICKS.

Whilst speaking of native curse-words, of which the Niger Delta natives possess a very large and diabolical assortment, I think it will not be uninteresting to give you one more example of native vituperation. This example one might call silent abuse, for it is not at all necessary to open your mouth in order to give due effect to this most terrible curse to a native woman. You have only to raise your right arm, and closing your fist allow your index and middle finger to spring up and form a V, and the thing is done. I have very often seen two women quarrelling in a very mild "go as you please" kind of way, but still showing signs of an increased pressure of steam accumulating, when suddenly one would put on a very disdainful look, and raising her right arm, would make the sign as described. Sometimes the other would simply make a motion with her right hand as if drawing a circle round her head, and with a snap of her fingers intimate that she casts the vile curse back on her opponent; or, if she was of a very susceptible nature, she would run away as fast as her legs would carry her, crying out at the top of her voice the curse that had been cast upon her. In some cases I have known this curse to have such an effect on a woman that she would lose her reason completely for some hours after. This curse of holding up the two fingers as described means "May you become the mother of twins," a truly frightful curse when one remembers that the almost general rule in the Niger Delta is that the mother of twins must be put to death and her children also. I say almost general, because in some places the mother is allowed to live; but her life is little better than a living death, for she becomes an outcast and must live the remainder of her days in the forest. If she by force of hunger ventures near a village or town she must do so only at night time, and must be very careful to guard against being seen by any other natives, for the Ju-Ju laws lay it down that if such a woman passes along any of the paths leading to the town or village, those paths would be defiled and unfit for the rest of the inhabitants to use. She must not drink from the same spring or water supply of her own people; she must not touch anything belonging to them. The consequence is that the mothers of twins simply die from hunger and exposure, or they take their own lives.

In all towns and villages of the Niger Delta there is always some old hag of a slave woman whose prerogative it is to kill the twin children; in the larger towns there are several of these killers of twin children; immediately on the birth of twins one of these old women are sent for and upon her arrival she takes each child by the feet and the back of the neck and breaks its back across her knees. The bodies are then placed in an earthen pot and taken into a dense part of the

bush and then left to be devoured by wild animals and insects. In some parts of this district the children are not killed but simply thrown into the bush to be devoured. In the few cases where missionaries have been successful in getting these children delivered up to them, their lives have been saved; but so far I have never known of any of these children so saved being allowed to take his or her place amongst the rest of the community. As a matter of fact, up to now I doubt whether one of them would be safe if it strayed outside the mission compound, and cases have occurred where twin children have been stolen from the missionaries and murdered by their relatives.

Another cruel custom in this part of the world is that of killing the child of a woman who dies in giving it birth, and burying it with its mother; this is not done absolutely from any superstition, but simply because the mother being dead there is no milk for the child, and these people do not yet know the uses of a feeding bottle or condensed milk. A foster mother is almost unknown in the country. I say almost unknown because cases have occurred where a foster mother has been found; but the child must be an exceptionally strong and healthy one, besides which the position or power of the father of the child, or relatives of the mother, would have to be such as would enable him or them to compel some woman to become the foster mother.

The cases when this is done are so very rare that I do not remember any successful one; but Miss Kingsley assures me she has known of such, and her opportunities of getting correct information on this subject were greater than mine. There is a ceremony, however, to be performed to insure the dead mother's spirit from returning to claim the child, which I think should be recorded.

A suitable sized piece of plaintain stem (that portion which has the fruit clustered round it) is procured and forced into the womb of the dead mother. This according to native ideas prevents her spirit coming back to fetch the child, and the mother thinks she has the child with her. This account has been confirmed by an English lady who was present on two occasions when this ceremony was being performed and succeeded in restoring, in one case, the mother to life, as she found the mother was not really dead but only in a state of coma from excessive loss of blood.

Another form of dumb cursing is that of which the cursing stick is the example. In some parts of the Delta close to Lagos and the Yoruba country the thumb held in this particular manner is a curse of awful import to a native. This curse may be surreptitiously made use of, by a prisoner on trial, before a British Court of Justice; in this manner (showing how it is done), by hiding it up his sleeve and pointing at the witness, who seeing the head of the curse stick in the hand of the prisoner, stops as if shot. As a matter of fact this stick was taken in open Court from a prisoner by the orders of Sir John Smalman-Smith, late Chief Justice of the Colony of Lagos.¹

¹ My authority for the above is Sir John Smalman-Smith, late Chief Justice of the Colony of Lagos. Miss Kingsley is however inclined not to agree with him.

Clitoridectomy.

The custom of excision of the clitoris is very much practised amongst the tribes dwelling on the banks of the Cross River and in the Old Calabar district as also in many other parts of Western Africa. I have questioned both native men and women to try and get the native's reason for this rite, but the almost universal answer to my queries was "it is our country fashion," a most exasperating answer, but the only one returned to a very large percentage of questions, in all parts of Africa. In some few instances I was fortunate enough to get more definite answers to my queries. One old man explained to me that the rite was practised amongst his people because it was found favourable to continence. Several old women told me that in days gone by, long, long ago (these people have no idea of dates) many women suffered from a peculiar form of madness, and it was found that this rite had the effect of reducing this in a marked degree, so ever since that time it has been the custom of their country.

The mode in which the operation is performed varies in different tribes; in the Old Calabar district it is done in the following manner: that part of the top of a cocoanut shell, which has the three eyes in it is carefully cut off and scraped quite smooth and thin; then the eye that lets out the milk is carefully bored and the edges scraped quite smooth; the *glans clitoridis* is then drawn through this hole and cut off with a razor, knife, or in some places by a piece of bottle-glass which does duty for a razor or knife. This manner of performing this operation was confirmed by Thomas Forshaw, Esq., of Liverpool, whose connection with the West Coast of Africa dates from some time in the fifties.

There seems to be no particular age at which the native law enjoins the performance of this rite, though it is generally carried out when the girls are young, except in the case of a woman bought or raided from some tribe which does not practise clitoridectomy.

Some of the customs the people of Western Africa have for securing the chastity of their young girls are worthy of being mentioned. Previous to 1860 it was the custom in Lagos for young girls to wear only a loin cloth of a hand's breadth, which they had to take off on meeting a Ju-Ju man to intimate to him that they were chaste; the law being that if the Ju-Ju man caught a young girl parading the streets with the outward signs of virginity on her, which she had lost the right to wear, she became his property until she was redeemed by her friends paying a fine varying in amount according to the status of her family. In the case of a free girl the fine would be much greater than for a slave girl. This practice of exposure was also customary on meeting a white man, as in those days a white man was looked upon as Ju-Ju. This custom I saw carried out myself as late as 1864 in the native parts of the Island of Lagos, though at this time Lagos was already a British colony.

The people dwelling in the immediate hinterland of the *Ekrika* country have also a very curious and somewhat cruel custom for the safeguarding of the chastity

of their young girls. The particulars of this custom were given to me by a chief of Opobo on the occasion of his having received in payment of a debt a young girl belonging to these people. The custom consists of scraping the *labia pudendi externa* until a raw surface is formed; then the two parts are brought together and kept in that position until the *labia* grow together, thus completely closing up the opening into the vagina. When the female thus operated upon draws near the age of puberty, she is taken into a part of the forest sacred to the female portion of the tribe, and there undergoes a second operation which consists of this false hymen being perforated by one of the old women of the tribe by the insertion of an ivory probe about the thickness of a lead pencil, this being done to allow of the free passage of the menses. This curious custom was brought under my notice, as I have already stated, by a native chief who had received a young female slave in payment of a debt. In this case the false hymen had not been punctured previous to the girl's leaving her own people; the consequence was that on her arrival at puberty her sufferings were very severe, and her new owner applied to me to get an English medical man to see her. Luckily the chief had already related to me the curious custom of this girl's tribe so I was able to explain matters to the doctor, who successfully operated and informed me afterwards that from the appearance of the parts he was inclined to think the chief's information was quite correct, though if it had not been explained to him he most certainly would not have thought the growing together of the labia was anything other than an ordinary freak of nature.

Since writing the above I have learnt that this custom prevails amongst the Arabs, and is not unknown to anthropologists.

With regard to the photographs illustrating this paper, I think it would not be out of place to mention a curious fact about the ways of an uneducated native when he is shown a photograph or picture of anything for the first time. He generally turns it upside down or endways to look at it; even after having been shown a picture several times and having had it explained, a fairly intelligent native would be almost sure to get hold of it the wrong way up if he wished to explain it to his friends afterwards.

But if he could not find the original picture shown him and attempted to describe one that had not been explained to him he would be certain to hold the picture any way but the right way.

Photographs of single figures of people they knew they could generally see the likeness and recognise the person; but not always from the face, oftener than not it was some peculiarity of dress, the hat, the man's stick, his bandy legs, or some peculiarity in the cut of his clothes, that they recognised.

Description of Plates VIII and IX.

Plate VIII.

No. 1.—Viper's tooth, Fetish.

- „ 2.—Native made toilette bottle for holding antimony, used by the native women to darken the skin under their eyes.
- „ 3.—Yoruba cursing stick.

- No. 4.—Symbols of Yoruba Secret Society.
,, 5.—Fetish neck charm.
,, 6. } Native symbols connected with Fetish worship.
,, 7. }
,, 8.—Musical instrument (made from a gourd) used at Fetish ceremonies.
,, 9.—The voice of Oro (a Yoruba god), exactly similar to the Bull Roarer of the Australian natives and used in almost identical ceremonies.
,, 10.—A number of brass ankle rings.
,, 11.—A curious article worn by the women in the sacred bush after undergoing certain native rights.
,, 12.—Two native made knives used by the celebrated native conjurer and witch doctor Adeoshun in murdering women. This man was executed at Lagos on the 9th August, 1884.
,, 13.—Native war horn, made from a gourd.
,, 14.—Three glass ankle rings worn by the Niger women. Native made from soda-water bottles.
,, 15.—Three anklets (wood), fine specimens of native cloisonné work.
,, 16.—Two brass anklets.

All these were borrowed by the Comte C. de Cardi from the collection of Sir John Smalman-Smith.

Plate IX.

- No. 1.—The Yoruba goddess "Odudua," the mother of the gods. From the collection of Sir John Smalman-Smith.
Nos. 2 and 3.—Two ivory anklets worn by Niger women. The weight of these two pieces of ivory is about five pounds. From the collection of the Comte de Cardi.
,, 4 and 5.—Specimens of ivory carving from the South-west coast of Africa. From the collection of the Comte de Cardi.

DISCUSSION.

Miss KINGSLEY.—There are only a few things which I should like to say regarding Count de Cardi's paper. I need not say they are not criticisms on it, for it is not for me to criticise one who has had so unique an opportunity as Count de Cardi of knowing the natives of the Niger Delta; his experience, moreover, was not merely a long residence among them, but a long friendship with them in the bargain. Without this factor of friendship long residence can count for very little in the acquisition of knowledge regarding these crafty and nervous people.

The first point I would like to draw your attention to is the mention M. le Comte de Cardi makes of the fetish king, the Ju-Ju king, and the civil king ruling together in one district. This is a subject on which I have long been working, but have not published anything because I know my information, in many parts, is incomplete. There are, however, a few points regarding it which I think I may speak safely on; one is that in all undisturbed true Negro cultures you will find these two kings, or in some places two aristocracies, one religious, and one civil. When a true negro culture is disturbed you have a tendency to consolidate those kings in one man, as in the case of Dahomey and Ashantee, but when outside pressure is absent they are separate. The regions where external pressure is absent, the most valuable regions for a student, are the Oil river and the Kru coast. M. le Comte de Cardi I leave in possession of the Oil rivers, and retiring to the Kru coast beg to draw your attention to the very similar form of social and religious organisation to be found there. The body politic among the

Kru people and their neighbours the Qua Quas is an elaborately organised democracy divided into three classes, or rather into three ages, of free men. The most powerful class are the *Gnekba*, or old men. The senate, the *Gnekba*, have two presidents, the Bodio and the Worabanh. The Bodio is the thing called the fetish king. He has charge of the spiritual politics of the nation. His position is one full of honour and inconveniences. Among other inconveniences his house is a sanctuary. A sanctuary, as I have frequently stated, is a sort of rookery of bad characters. A Kru friend of mine resigned office as Bodio, because of the sort of people who quartered themselves on him and the expense of feeding them and the rows they had amongst each other. He stood it for three years and did his best, and then came a man with homicidal mania, accompanied by epileptic fits, but legally innocent, and my friend resigned Bodioship after losing an ear and receiving other bodily damage. Moreover, apart from the worry of presiding over a sanctuary, the Bodio is held responsible for the crops, for the fishing, for epidemics, such as small-pox raiding his people, things that will happen and go wrong, and so in fact it is hardly worth having to be a Bodio. There was a fetish king in Calabar up to some twenty years ago; now the office, which was very similar to the Kru Bodio, has expired on account of its responsibilities and expenses. The only advantages the office of Bodio really offers is a small toll paid to the holder and the right to wear an iron ring round your ankle and be feared and reverenced as long as things go well with your community in the main; when they don't you can be deposed; when you are deposed you are looked down on terribly.

The other president of the *Gnekba* is the Worabanh. He has little influence in times of peace, but in times of war he is absolute ruler. I believe him to be the forerunner of the civil king.

Next in grade to the *Gnekba* among the Kru comes the military, the *Sedibo* class, the middle-aged men. Seemingly they are the rulers of the Kru people, but they are under the power really of the *Gnekba*, only the *Gnekba* are not so showy and easily observed. The *Sedibo* also have two presidents, the *Ibadio* and the *Tibawah*. These are equivalent in function to the *Bodio* and *Worabanh*; the one sees after the spiritual side of war, the other after military organisation.

The next in grade to the *Sedibo* is the *Kedibo* class, the young men. These *Kedibo* of Kru are the men all Europeans know in their generation as the backbone of white effort in West Africa, the men who act as seamen, servants, labourers, stewards, helpers in all hard work, ways to England in West Africa. When they have made enough money, and are old enough, they go back to their country and rise to the rank of *Sedibo*, and if wise enough pass on into the senate, the *Gnekba*; if particularly eminent they become officers in their grades. This Kru system I believe to be the typical West African form of the state. In the Oil rivers you have the additional factor imported into it by local conditions of domestic slavery, the Krus being a non-slave-holding tribe; but you will, I think, see from M. le Comte de Cardi's published description of the natives of the Niger Delta in West African studies, that the Negroes have extended this democratic system to their domestic slaves there, so that the lowest slave that paddles an Oil canoe may rise to the rank of a king.

With regard to those places where you have a fetish, a religious and a civil aristocracy ruling, you have much the same course of events and development.

I think we have most information from the Ga region. The neighbouring people, the Tshi, have a different form of state organisation—a military one—but among the Ga or Accras the history we have shows that the early form of government was a fetishocracy, the power being entirely in the hands of the *wourtsumi*, whom Reindorp calls the “foretelling priests or prophets.” The headman of these prophets was called Lumo, and he was supposed to be a nominee of the national fetish, Legbh, but I think we may assume he was elected by the local college of cardinals. His office did not go by hereditary succession. The government was carried on by officers of the Lumo, called Wulomo—fetish priests or servants—and the Wulomo had a headman, and that headman was rather like a civil king, but too priest-ridden to be satisfactory, being only the officer of the Lumo. Now and again it happened that the chief of the Wulomo was identical with the Lumo, both offices being held by the same man, as was the case with Osai Koi, but this proved inconvenient, and the law stands now that the acting king can never be a Lumo. Even if a prince becomes a Lumo he forfeits all right of succession to the stool or throne, for the headmanship of the Wulomo is now hereditary in a certain degree; in fact, the Accras have disestablished the Church.

I should much like to know whether the President has observed anything like a similar course of events in Benin, another fetishocracy region, one with which he is far better acquainted than I am.

I do not wish to detain you further than to say I completely endorse what M. le Comte de Cardi has said in favour of the operation of Ju-Ju. I believe more than he does that it is a power for good. It works evil, but so do some of our own Ju-Jus. With regard to the Long Ju-Ju in a pool M. le Comte de Cardi speaks of, I beg to say its local name is Abasi Inokun. It was instituted by a goddess who lived in that place, and who had some pet fish in a pond. I am not at liberty to say more. There are three other Long Ju-Jus in that same Oil river region, one of which I visited, but again I am not at liberty to say more. I merely wish to ask a question in conclusion. What is the connection between Long Ju-Ju places and sanctuaries, if there is one, for they are not identical anywhere? As to what sanctuaries are, I have had my answer, I believe a full and complete answer, from that great student thinker, Dr. Fraser, of the *Golden Bough*, in his last paper on Totemism, published this month. I beg to say if any one is interested in the Negro State-form, he will find what I have said concerning the Kru people supported, I do not say entirely, but with many further details than I can give without quoting from them, by Leighton Wilson and Labat and Barbot. I picked my information up from the many *Kedobi* Krumen I have met, and the ex-Bodio attached to the German Government at Victoria, Ambas Bay Cameroon.

Colonel R. C. TEMPLE, C.I.E., remarked that he had been much struck with the close similarity between the character of the scenery depicted on the slides exhibited by the authors of these papers and that prevailing in the Andaman and Nicobar Islands and parts of Burma and the Indian Peninsula. The Comte de Cardi describes the difficulty that the people of Western Africa have in understanding the meaning of pictures, a difficulty experienced in those parts of the Indian Empire with which he was familiar. His account of the oil-palm is very closely applicable to the cocoanut of the Nicobar Islands and Ceylon. Every part of the tree is in daily economic use, and its milk is used as drinking water. The mode of

climbing the oil-palm is practically identical with that of climbing the cocoanut in many parts of the East.

He also noticed various analogies of custom—the habit in the Nicobars of destroying the property of the deceased, chiefly by placing it on the grave, the result of which is to render the accumulation of tribal or family property impossible; the human sacrifice at the death of a chief, which is analogous to the Hindu rite of Sati and the Meriah sacrifices of the Khândhs; the head-hunting in West Africa, which closely resembles the rule prevailing among the Nâga tribes on the Assam frontier; the gesture of the horned hand, which is found in many parts of Europe, particularly Southern Italy. In Burma the habit of women stripping themselves in the presence of those whom they wish to direly insult is a survival of some form of symbolical cursing which exists only in this attenuated form. So the difficulty which more enlightened priests and people find in getting rid of old-established customs owing to the vested interests of the priestly class prevails in many parts of the world, and particularly in India.

COUNT DE CARDI, in reply to the question, "Was there any custom called blood brotherhood on the west coast of Africa?" said that there was, but to fully describe the custom would take up too much time that evening; he hoped, however, to embody a full description in some future paper.

Replying to the question, "Were the human sacrifices placed under the influence of any drug, which would account for their apparent disregard of death?" he went on to say that, in some cases, he had seen the male victims under the influence of strong drink, but in others the victims refused to touch spirits of any kind; in the case of the girl sacrifices, he felt sure they were not.

In reply to Miss Kingsley's question *re* the existence of sanctuaries in connection with the powerful secret societies and Ju-Ju centres, he said he had often heard of them, but had never succeeded in getting what he considered reliable information, or at any rate such facts about them as would justify him in giving them to the Anthropological Institute as being absolutely reliable. He was afraid we should have to wait until a real head priest of one of the very secret societies could be prevailed upon to enlighten us. Continuing, he would like to say that by nature the negro is secretive; but a Ju-Ju man of the higher grade or a secret society man of the upper class or degree is reticence itself on the inner secrets of his craft.

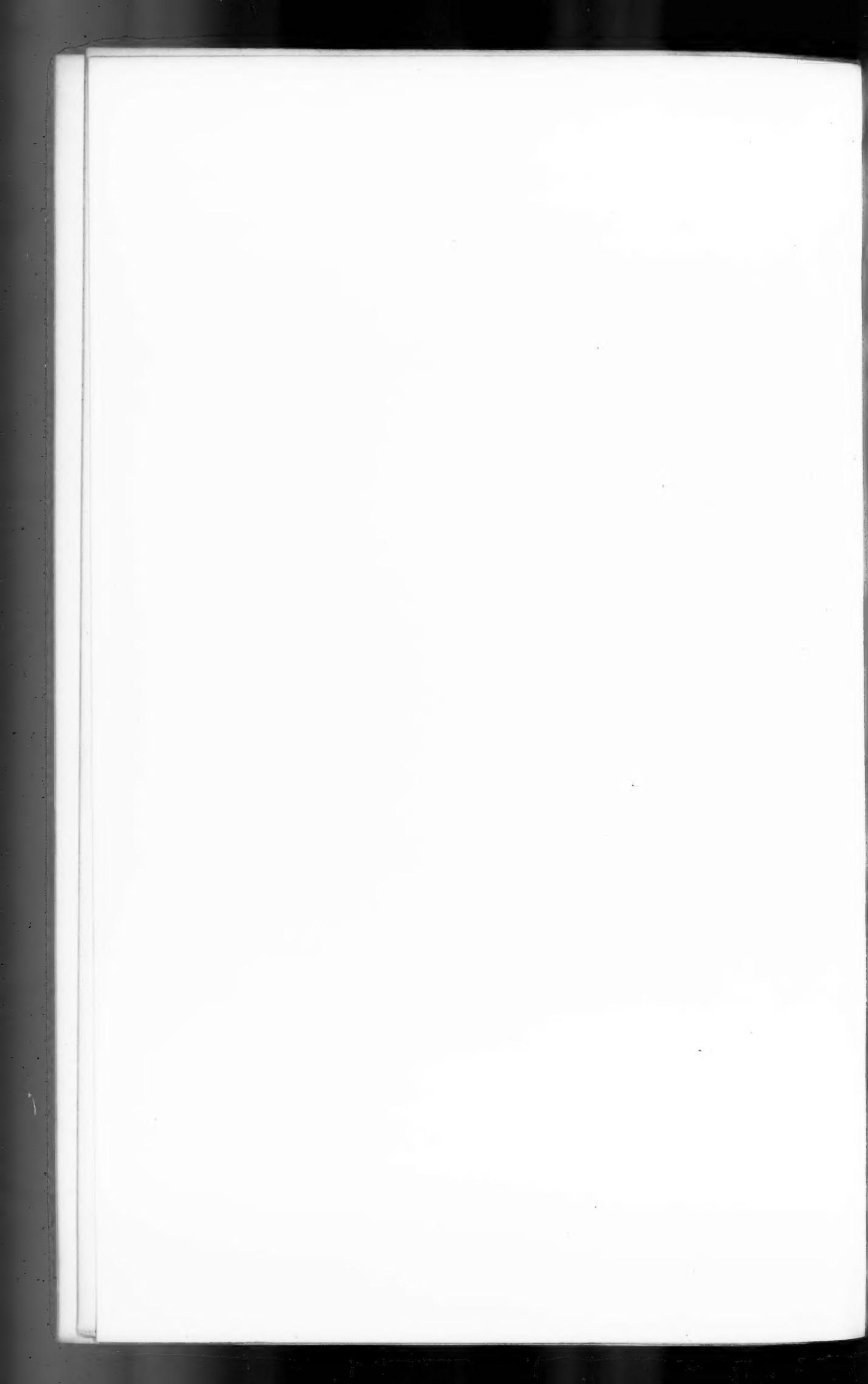
EXHIBITION OF LANTERN SLIDES.

(PLATES X TO XIII.)

MR. T. J. ALLDRIDGE, F.R.G.S., of Sherbro, West Coast of Africa, showed a large number of interesting lantern slides depicting different phases of scenery and of the natives in the Colony of Sierra Leone and the Hinterland. The value of the views was greatly enhanced from the fact of their having all been actually photographed by Mr. Alldridge personally and developed in the country, very frequently in spite of almost insuperable difficulties. Many of the pictures represented subjects which had never been previously shown in London. The native customs of Poro and Bundu and the Bundu Devil, also the Tasso men, were



SLAVE DRIVER AND SLAVES SHIERBRO.



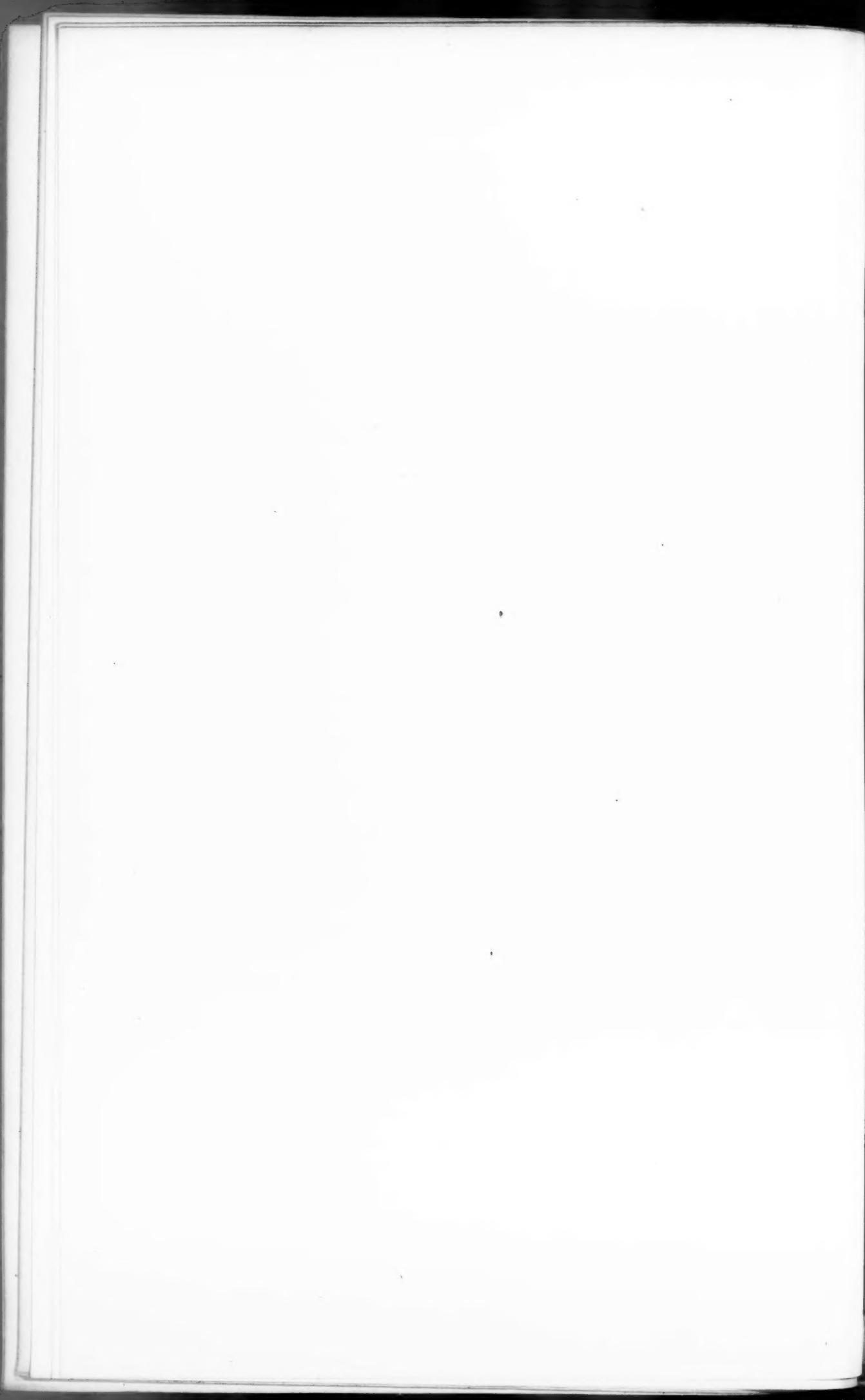


THE BUNDU DEVIL DRESS.



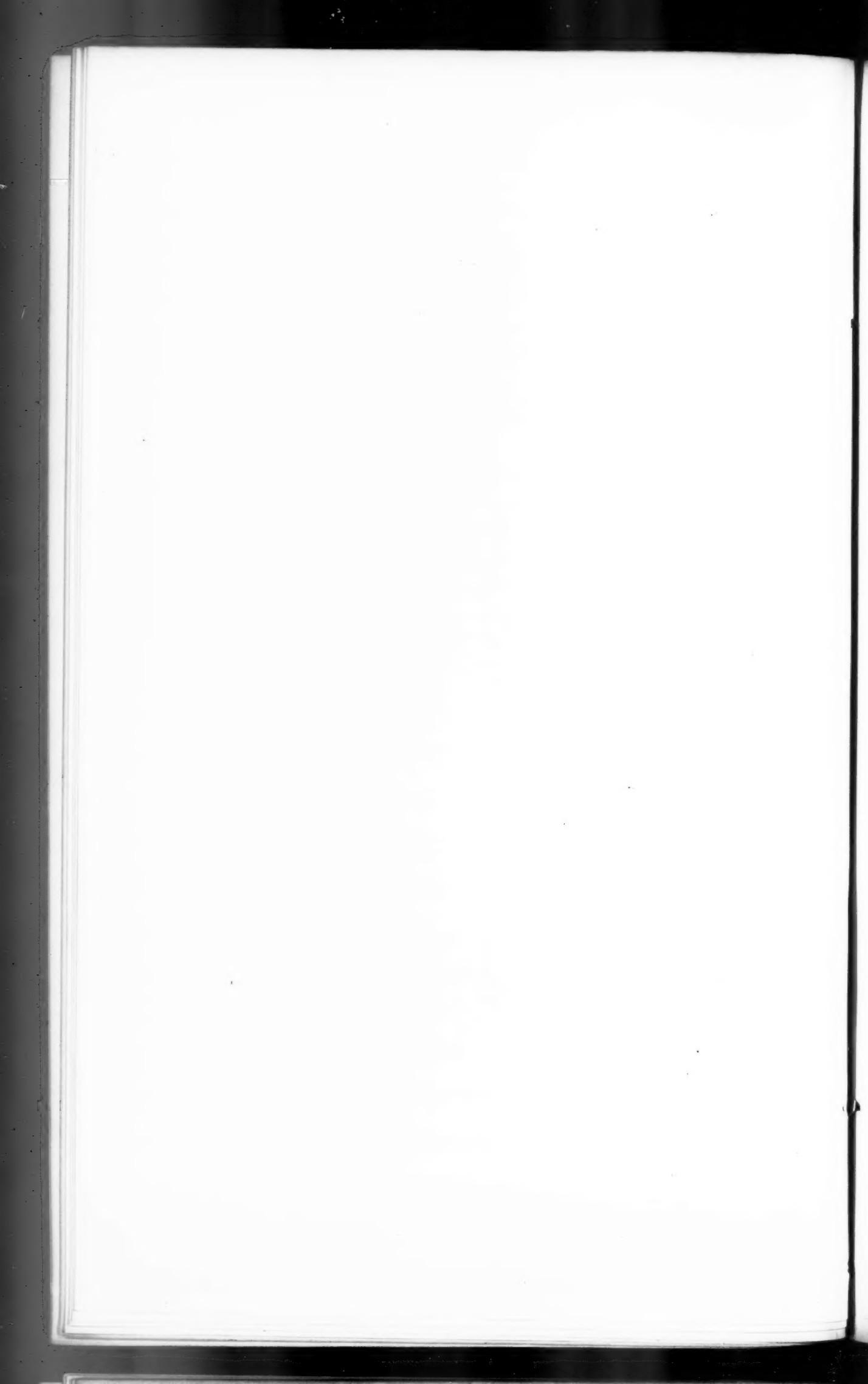


YENKETI SWINGING BRIDGE, SHERBRO.





NATIVE MUSICIANS, SHERBRO.



extremely peculiar, the costumes being beyond imagination. A realistic scene of a slave dealer conveying his purchases consisting of a man and woman—of no relationship—tied together by a rope around their necks, the woman carrying a suckling infant, was most touching, and presented to the sympathetic audience a clear idea of this iniquitous traffic in human beings, which happily by the energetic measures of the Government has now become practically obsolete in this part of Western Africa. When the capture was effected the wretched people were being transported overland to the Susu Country, there to be exchanged for cattle, which in their turn would again be bartered for another lot of slaves, and in this manner the traffic would be continued had it not been for the timely interposition of the Government in safeguarding the interests and security of the interior people. The view of the cemetery at Waima in the Konno Country where the collision between the French and the British occurred in December, 1893, and which was photographed by Mr. Alldridge in April, 1894, brought out melancholy recollections of a regretful episode. The beautiful view of a Yenketti, or hammock suspension bridge, over the Sehli River in the Kuranko Country was received with much appreciation, as were also the exquisite views of tropical foliage, particularly a cluster of bamboos of great height, standing out with such distinctness and beauty as to lead one to imagine that this typical scene was actually present. A short description was given as each view was exhibited on the screen, and the audience had an opportunity upon this occasion of hearing the remarks of the Pioneer (Mr. Alldridge) in the opening up of the very little known Mendi Country, which were not only of much interest but of considerable importance in delineating the curious customs of these semi-savage tribes who by the recent rebellion have become somewhat notorious.

ORDINARY MEETING.

MAY 9TH, 1899.

C. H. READ, Esq., F.S.A., *President, in the Chair.*

The Minutes of the last Meeting were read and passed.

The PRESIDENT introduced Dr. A. L. BENNETT, who had lately returned from the French Congo, and who proceeded to read his paper, "Ethnographical Notes on the Fang," which was well illustrated by lantern slides, and a collection of masks and other objects, from West Africa.

Discussion was carried on by Mr. F. G. MARRIOTT, F. C. SHRUBSALL, G. L. GOMME, WM. CROOKE, and Dr. GARSON.

The PRESIDENT and Dr. GARSON expressed their pleasure at the appreciation of their book *Notes and Queries* expressed by Dr. Bennett, and in closing the evening with a vote of thanks to Dr. Bennett, the PRESIDENT hoped that he would in future favour the Institute with more of such useful papers.

ETHNOGRAPHICAL NOTES ON THE FANG.

BY ALBERT L. BENNETT, M.D., F.E.S.

[WITH PLATES XIV TO XVII.]

CONTENTS.

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|--|--|
| I. Introduction. | XII. Religion, Fetish or Biang (medicine). |
| II. Physical and Moral Characteristics. | XIII. Witchcraft, Cursing Dead Relations. |
| III. Clothing, Ornaments, Painting and
Tattooing. | XIV. The Ngi (a Fang Secret Society). |
| IV. Habitations. | XV. War, Hostages. |
| V. Navigation, Hooks, Nets, Fishing,
Traps. | XVI. Hunting Traps. |
| VI. Metallurgy, Fire, Machinery. | XVII. Burials. |
| VII. Customs. | XVIII. Akôm. |
| VIII. Invention, Natural Forms, Conserva-
tism. | XIX. Abnormalities (Natural Deformi-
ties), Albinism, Erythrism, Her-
maphrodites, Deformations (Arti-
ficial Deformities), A. Facial ; B.
Dental. |
| IX. Ornamentation. | XX. Fang Proverbs and Sayings. |
| X. Food, Cooking. | |
| XI. Anthropophagy. | |

I HAVE the honour to come before you this evening, for the purpose of making known to you the result of my observations while dwelling and labouring among that great and powerful tribe of the Bantu family, known as Fang. In presenting this paper, I do so fully aware of its deficiency; but the information obtained from natives was never accepted nor recorded as authentic, until it had been frequently confirmed by others. I also desire to acknowledge my indebtedness to the Council of the Anthropological Institute of Great Britain and Ireland, for sending me a copy of *Notes and Queries on Anthropology*, a book which ever proved an invaluable guide and help to me while living among the Fang, and studying their customs.

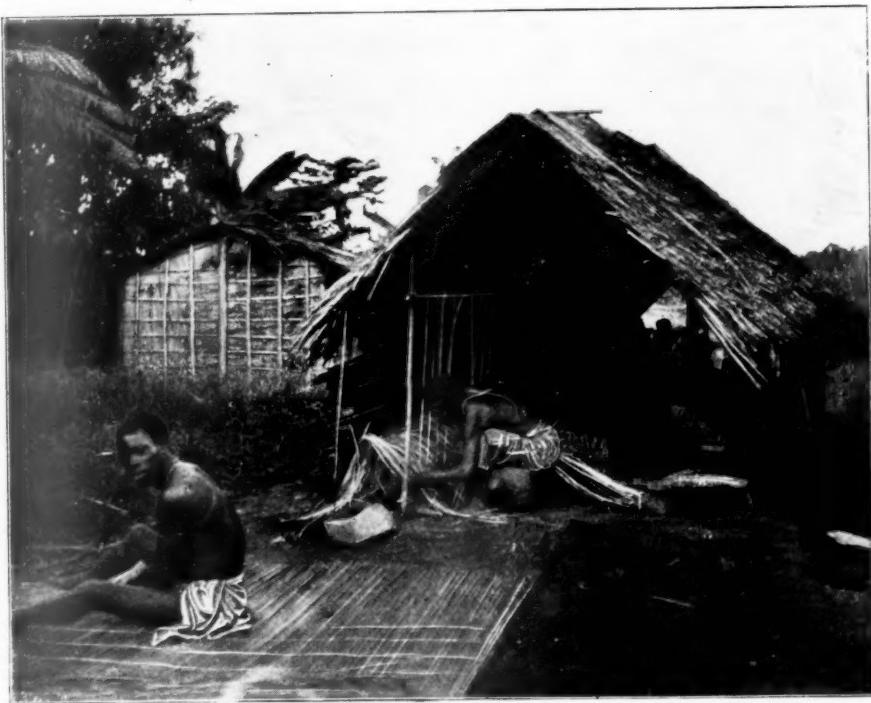
I.—*Introduction.*

The large tribe of people known as Fang inhabiting a considerable portion of the French Congo was first described by Du Chaillu.

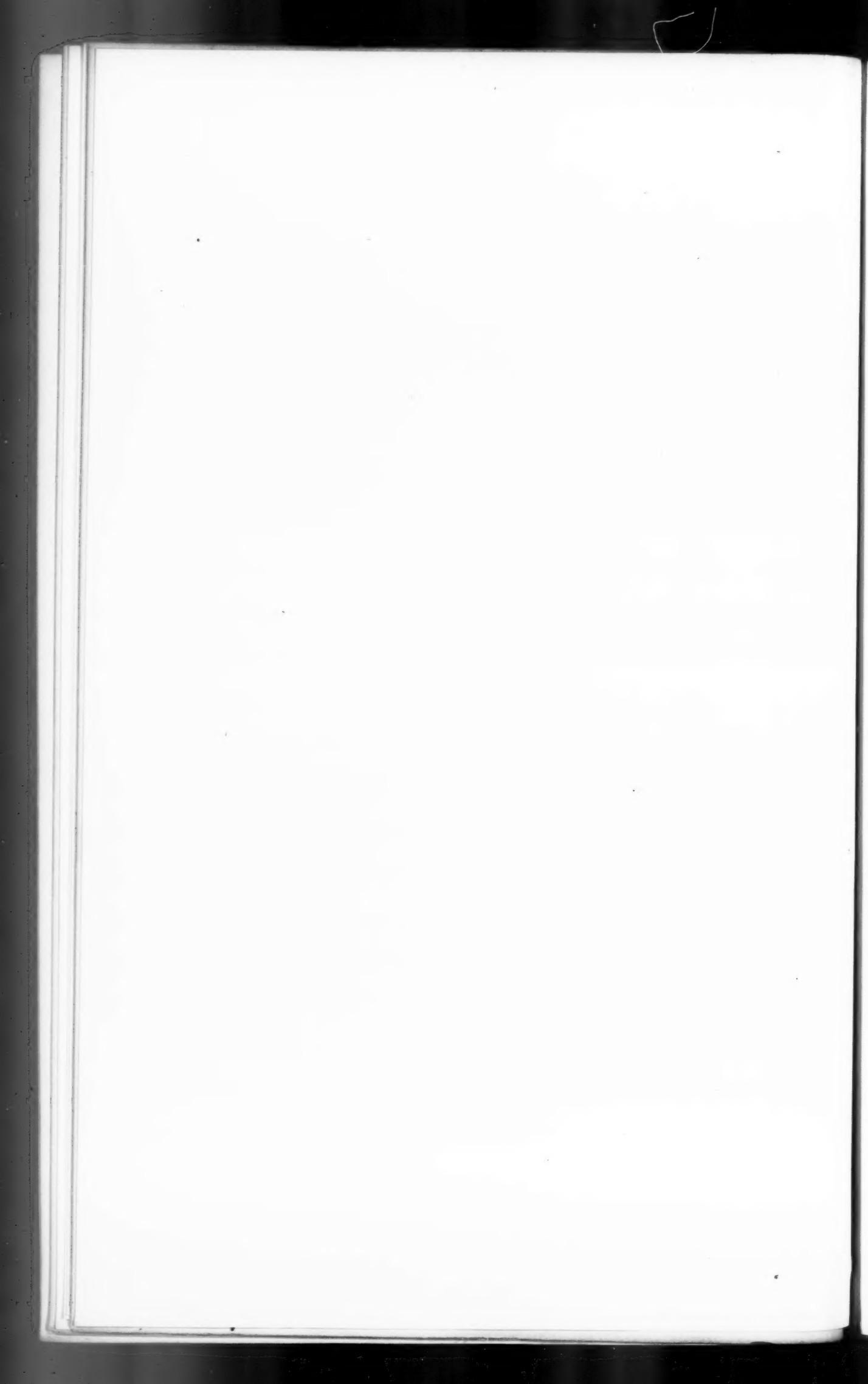
Records show that in 1867 the French naval officer Admiral Fleuriot de Langle placed the number of Fang within French territory at nearly sixty thousand. Since that time this powerful tribe has rapidly increased in numbers. Between the Ogowe River and the Gaboon, the Fang may be counted by thousands,



FANG MEN.

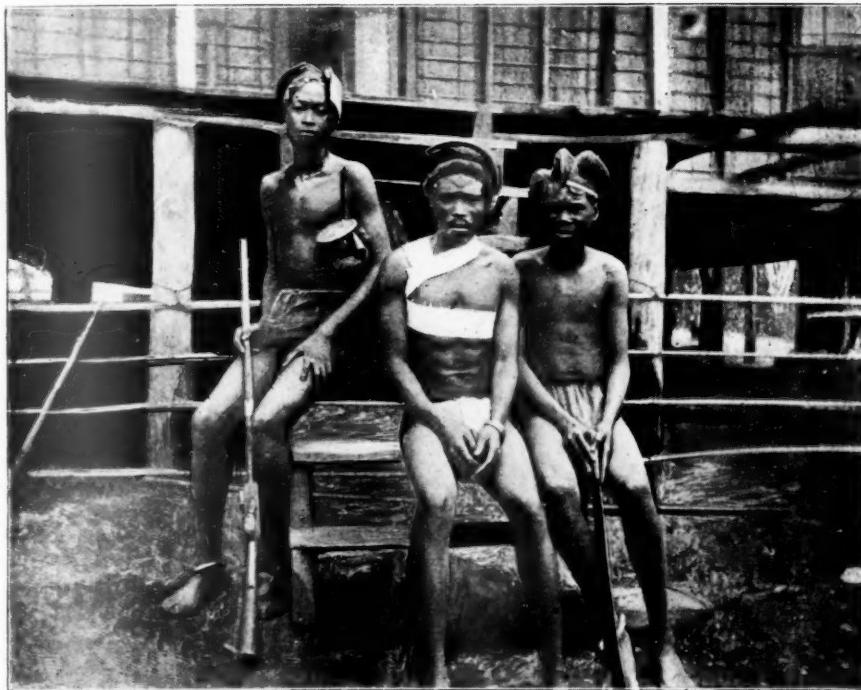


FANG HOUSE.

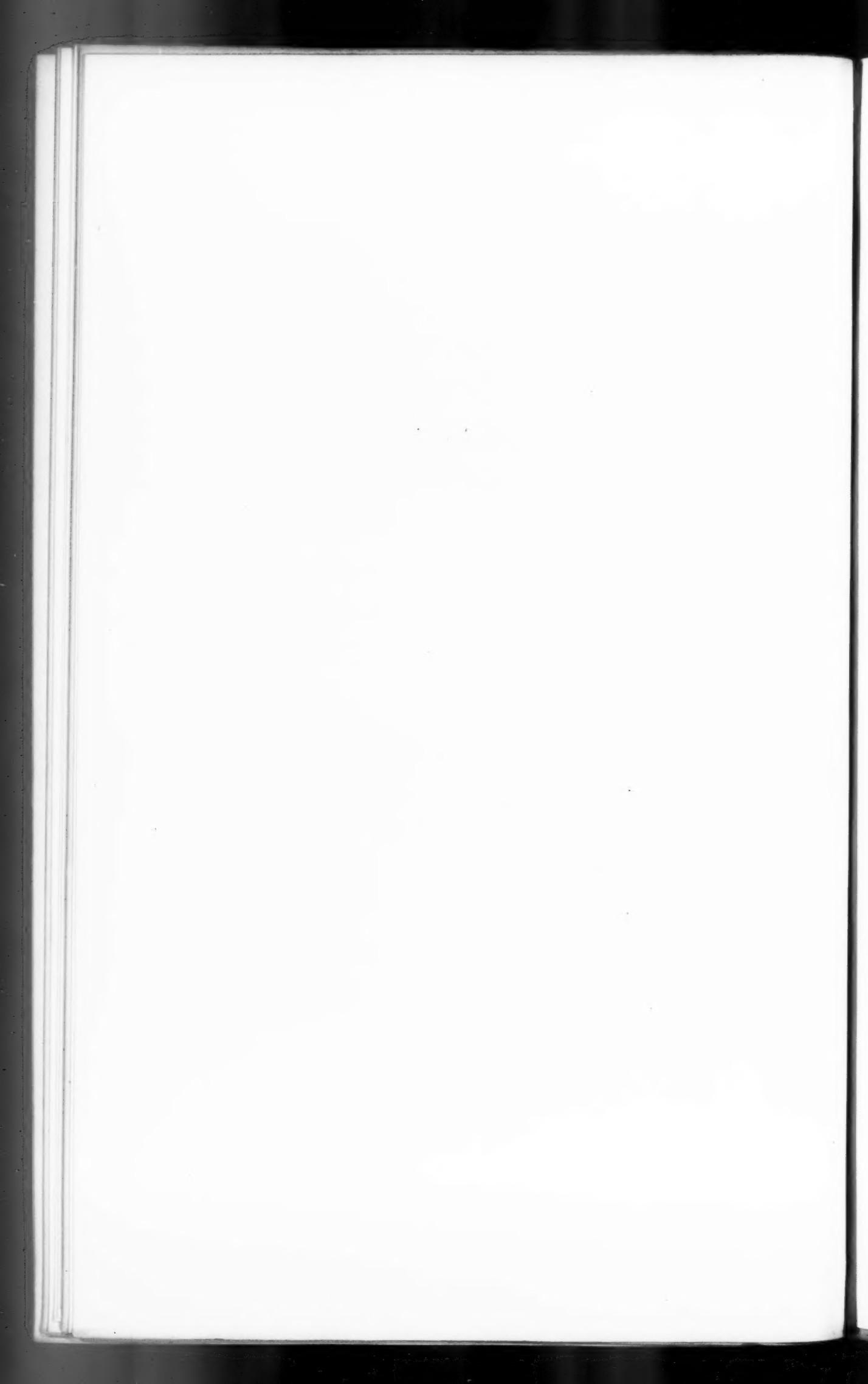




FANG WOMAN.



FANG YOUTHS.

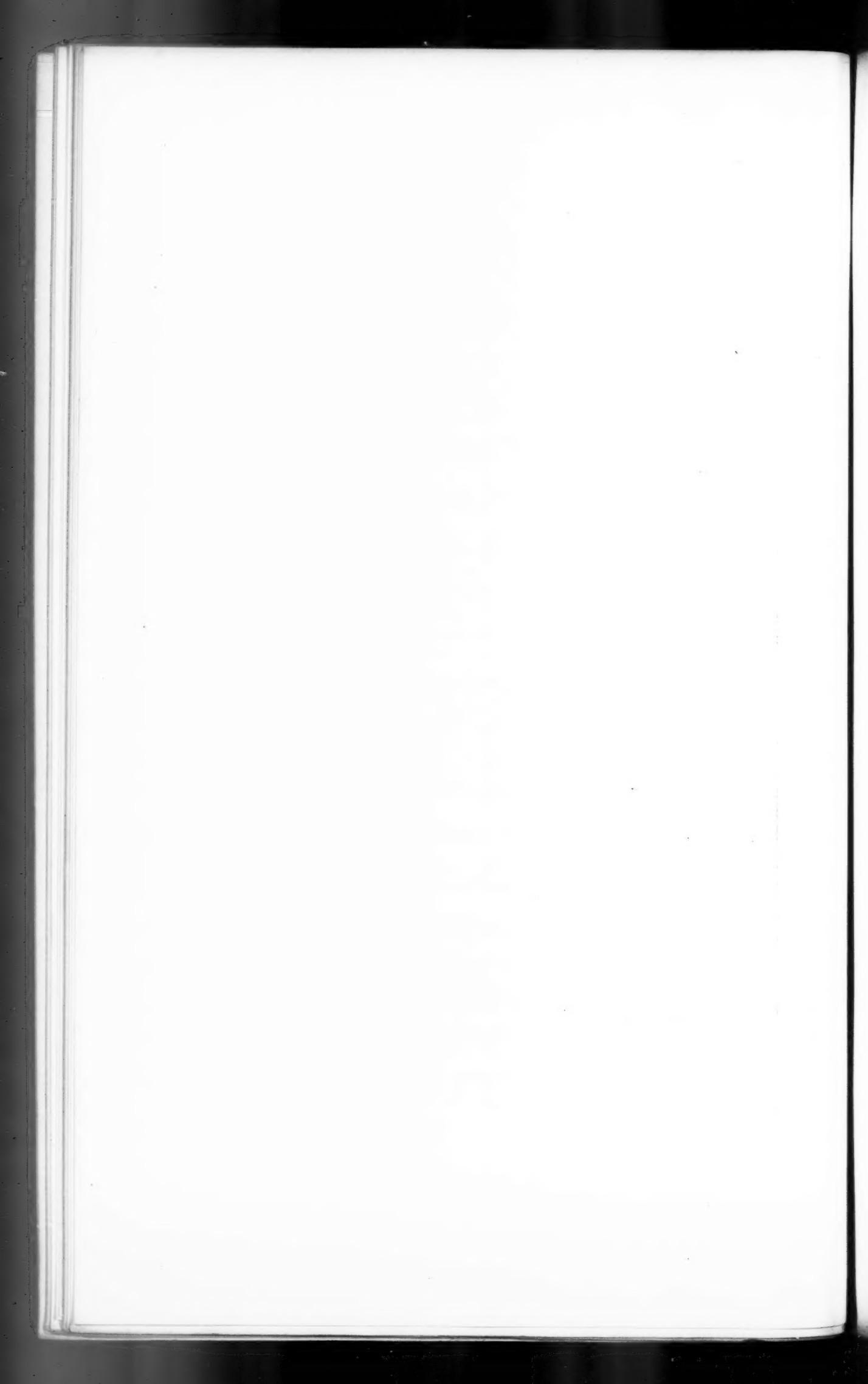




FANG DANCE.



ABENG OR PALAVER HOUSE.



and like a resistless army they are steadily approaching the coast, building towns and displacing weaker tribes. That fine race of people, the Mpôngwes, often spoken of as the "aristocratic tribe," and ranking first in the scale of civilisation above all other tribes in the French Congo, is rapidly dying out, and they are already being supplanted even at Gaboon by the migratory Fang.

The Bulu people inhabiting a portion of the German sphere of influence in West Africa are without doubt very closely related to, if not a direct offshoot from, the Fang; their customs are identical and their language so markedly similar that a person who is able to speak Bulu is readily understood by the Fang. The first day of my arrival among the Fang, after residing in Bululand, I was able to make known the reason for my coming and to ask and answer ordinary questions. While visiting on a small island called Nenge-nenge in the Nkomo River, a very old Fang man told me as follows: When a lad his grandfather had told him that, a long time ago, many of his tribe "changed their towns." These people first travelled far in canoes, and then after journeying for very many days through the forest, they "stopped walking and made new towns," and they did not return. My informant's father had told him later more about these people; they had been heard from, and their long absence from the original tribe had so changed them that "they spoke new words" (a new language).

Examples could be given almost without limit of the great similarity in the language as spoken by the Bulu and Fang. A few will suffice; and I will select from the proverbs of the people which are also identical. Tell a Bulu man to hurry with his work, he will often reply, "*Alu da dayi bol' nzok?*" (Will one day rot an elephant?). The Fang speak the same proverb thus: "*Alu avoti bol' nzok?*" Again, the Bulu use the words *Melu myus* (the days that are past), *Melu osu* (the days that are to come), *Melu mesese* (all the days). These sayings and numerous similar ones are in daily use among the Fang, the words used and the idiom being almost identically the same as in Bulu. I have wondered if the account given me by the old Fang man at Nenge-nenge about the people who years ago "changed their towns," might not be of more than passing interest as touching the genesis of the Bulu.

The Fang people are spread over an immense area of country, and when questioned regarding their numbers they usually reply, "There are Fang and Fang; if you walk and sleep in towns and towns for many *moons* (months) you will find Fang." In the future it will be found that in the ethnography of equatorial Africa the Fang will hold a very important place. As before stated they are unquestionably closely related to the Bulu, and Compiègne recognised a marked similarity between them and the Osyeba, Monbutta and Nyamnyam people. There are several scattered tribes of dwarfs among the Fang. Five of these pygmies live within two miles of my station, and they tell me that more of their people will soon "move their towns" and come to live on the banks of the Nkomo river. The Fang people look on the pygmies as a very clever and superior people, and not without good reason. An old headman told me that the *mon nqui* (dwarfs) first

discovered how to work *eki* (iron) and then taught others. They are also skilful hunters, and frequently succeed in killing game when others fail. In trade, it is almost impossible to cheat a dwarf, hence the Fang saying, “*Mon mei meduk mebe, mon nqui aduk aroti.*” (You can cheat a Fang twice, a dwarf once.) In this proverb the word “*mei*” equals Fang (see photographs and measurements of Fang dwarfs). The Fang are cannibals and only fear of the authorities keeps them in check. In the autumn of 1898 a man was killed and eaten within ten miles of our mission station on the Nkomo river. I heard of the affair two days after the man had been killed, and taking a boat hurried down to the place accompanied by one of the sons of King “*Kelun*” from Nenge-nenge, as guide. In the palaver house of the town was a captive boy in chains. The people of this town would not admit having eaten a man, yet did not deny it; they said that the human bones in a hole behind the palaver house were those of a man who had “died two days before.” I afterward learnt that the captive boy had been killed and eaten a few days after my visit. Several Fang have admitted to me that “some Fang eat man meat,” and they have been told that it is far more enjoyable to eat than goat. My informants always added that they would not do such a thing—“only bad Fang did so.” What I have learned from others and my own observations lead me to believe that an immense tract of country in West Africa from a trifle north of the equatorial line extending even as far northward as to include a portion of the German sphere of influence in the Cameroons, is occupied by numerous anthropophagous tribes all more or less closely related.

II.—*Physical and Moral Characteristics.*

Physically the Fang are a fine people. They may be classed as of medium size. Some of the males are exceptionally large and well built. At Foulabifong, the Fang village on the Nkomo river, where I reside, there is a man belonging to the Esisis tribe who is the largest and finest specimen of humanity I have ever seen in Africa (photo shown on screen).

The skin colour of the Fang is sooty-black or dark reddish-brown, chocolate: (numbers 2 and 3 Topinard's scale); coal-black skins (number 1, Topinard's scale), are in the minority. The skin is smooth and when well cared for, as it very often is, it feels soft and velvety. In the adult the skin is lighter in the axilla; the palm of the hand and sole of foot are permanently yellow. The average Fang eye has a dark iris (class 1, Topinard's scale), and the eye-balls are placed with their long axes nearly in one horizontal plane. I have occasionally noticed a compression of the outer angle of the opening, mostly in females, strongly suggestive of the “almond eye.” The hair may be classed as black and woolly. It is uniformly scattered over the hairy scalp; the hairs are coarse in texture. The males seem to have an aversion to hair on the face and frequently pluck if out; only a small percentage grow beards.

In adult males hair is often quite abundant on the chest and forearms.

The face is oval in form.¹ The average nose is of the negroid type (short, broad, nearly straight), Fig. 7, Topinard; or the Australoid or Papuan (broad, with the lower part forming a flattened and depressed hook), Fig. 8, Topinard's scale. The skull is thick and strong. Very often the brows are depressed deeply, the cheek bones are prominent, and at the angle of the inferior maxillary bone there is an inclination to bulging outward. The alæ nasi are broad and thick, and the nasal bridge often much depressed giving the typical, flat, turned up nose of the negro. Yet I have observed among the Fang some handsome aquiline noses, and quite frequently the Australoid or Papuan type. I have frequently noticed that the possessors of the aquiline, or Australoid type of nose, showed a higher degree of intelligence and a more genuine desire to learn "the white man's ways."

The ears are large and well developed, inclined to spread outward and having broad thick lobes. The teeth are good and symmetrical; Fang men and women file the upper and lower incisors to a fine point and give as their reason for so doing, that it is *mbung* (beautiful). The head of an average Fang male sits well on the shoulders, the neck is strong and muscular, the "Adam's apple" is not highly developed. Very little attention is given to the cultivation of hair on the upper lip.

The breasts of Fang women are very pendulous after bearing children; and in some cases the breasts in males are very highly developed (photo on screen).

The muscles of the arms, back, buttocks and thighs are often splendidly developed, far more so than in the Mpôngwe, Mabeya and many other West African tribes. The Mpôngwes are rapidly degenerating. In the male Fang the gluteal muscles are not highly developed. The gluteal muscles in the female are often developed to a very high degree, measuring round from $36\frac{1}{2}$ inches to $39\frac{1}{2}$ inches.

Fifteen Fang males were measured and averaged as follows:

Height 5 feet 9 inches.

Chin to pubes $27\frac{1}{4}$ inches.

Pubes to inner malleolus $32\frac{1}{2}$ inches.

Inner malleolus to tip of great toe $8\frac{1}{4}$ inches.

Shoulder to wrist $24\frac{1}{2}$ inches.

Wrist to point of index finger $8\frac{1}{2}$ inches.

In males the thumb is long and broad in the terminal phalanx; the nails of the hand are broad and flat. I have often seen a man use his great toe to pick up an object off the ground, and flexing the leg bring the object to his hand. When journeying through the bush with a caravan it is very interesting to notice how the native uses the great toe to aid him in climbing a steep hill. The sexual apparatus is very highly developed, especially in the males. The women are the

¹ It has not been possible for me to devote the time needed for a detailed study of Fang crania. The few Bulu and Fang skulls I have had opportunity for examining presented very little, if any, different characteristics. The skulls I examined were decidedly prognathous, but not large.

bread-winners and some are strong and muscular, while many more are weak and worn out from ceaseless toil.

The Fang make good carriers, and will do a splendid day's journey even in the wet season with bad forest trails, if not overloaded. A carrier's load should never exceed 25 kilogrammes; and 20 would pay better on a long journey. The first day out with a caravan the men usually drag along slowly, until their loads settle well down in the *kingi* and fit their backs. The *kingi* is a very ingenious contrivance for carrying a load in; it is usually made from a forest vine with a plaited head strap. To hurry carriers the first day is a bad mistake; poorly adjusted loads chafe and cause sore backs, and before night the whole caravan is tired out and sulky. It is a wise traveller in Africa as elsewhere who knows how to save his men.

A very noticeable fact among the Fang is the scarcity of old men. I attribute this largely to the ravages of syphilis; the same terrible disease that has done so much towards the degeneration of numerous coast tribes, and which is already playing fearful havoc among the Fang. Indolent, untrustworthy and warlike, they are nevertheless a most companionable people. The slightest piece of drollery or a joke immediately causes laughter. It has been my privilege to visit many foreign lands including China, Japan and Korea, yet never in my life have I met such an absolutely good-natured, fun-loving people as the Fang.

The men are not fond of work. They frequently ask me for something to do to "earn a cloth." If I tell them to cut fence poles or good clean bark in the forest, they decline. A male Fang's idea of work is to sit in the *Abeng* (= palaver house) and make fish lines by rolling pineapple fibre along the upper portion of his thigh, or to manufacture *Abi* (roof thatch). At these occupations he can converse with all comers, hear the news and take his part in talking a palaver. They are a revengeful people and will keep up a palaver over a woman for many years. If they do not succeed in shooting a man during a palaver they do not hesitate to fire at and kill a woman, while captives held as hostages are often treated with great cruelty.

The women regard virtue very lightly. Before marriage a girl can do nearly as she pleases. It is absolutely safe to state that it would be almost impossible to find a maiden in a Fang village over sixteen years of age. Adultery is common, and one of the chief causes of "women palavers." Women rank first in value as goods for trade, next in value are goats, then guns and cloth. The greed for goods has a strong hold on the people. They learn quickly but have very little originality. They have no obscene rites. Their habits are very dirty; they will wash in a small pool of water and, while bathing, fill the gourds or imported jugs with the water in which they are washing and use it for domestic purposes. In many other ways they are absolutely filthy, and descend to the level of brute creation. They are not over-burdened with modesty, both sexes frequently bathe together in a perfectly nude condition. A male Fang passes a large percentage of his time in

the palaver house, where he loves to sit and gossip around the log fire, or lounge on the *Enong* (a native bed of poles).

Dancing is a favourite pastime, especially at the time of new moon, when the dance seems to have some religious significance. A Fang dance is a sight worth seeing; arrayed in long streaming armlets of dried grass, and large bunches of forest beans and mollusca shells tied around the ankles for castanets, they go through a series of rapid and graceful movements, some of which are not entirely free from obscenity. Flaming torches made of resin wrapped in plantain leaves are stuck in the ground and the drums keep up a perfect fusillade; the whole making a weird and extremely interesting spectacle. With short intervals of rest the dance usually continues throughout the night until daybreak (photo of dance shown on screen).

III.—*Clothing, Ornaments, Painting and Tattooing.*

Fang men and women usually go about bareheaded; some obtain imported straw and felt hats from the traders and are very proud of them. A red worsted night-cap sold at the factories is very popular and much worn. These head coverings are chiefly worn for ornament and not to afford protection from the sun or weather. Until the opening up of trade among the Fang people their clothing amounted to almost nothing. The men wore a waist cloth made of bark from certain trees, a strong, tough, fibrous material, and the women wore a girdle stripped from the plantain stem, with some leaves from the bush or a piece of the plantain leaf tucked through the girdle in front and passed downward, backward and upward between the limbs and fastened to the girdle behind. Very often the women wore a kind of bustle made of dried grass dyed black, or red. In sitting down the women are very careful to first arrange the bustle. The native bark cloth, the girdle and bustle, are still worn in the bush towns; the women often make the girdle of imported glass beads strung on string made from pineapple fibre, but people living in towns along the river banks wear imported cloths obtained in trade. As a general rule boys and girls run about without clothing until five or six years of age. Imported cloth is worn by both sexes and is often sewn together very skilfully and decorated with pieces of different colours. There are no recognised peculiarities of dress restricted to the subdivision of tribes. The cloth is cut out and sewed by each individual owner unless it is a trade cloth previously sewn. Cloth is usually hemmed and worn as a simple wrapper around the waist, and held in place by rolling in and tucking the upper border on itself. The upper portion of the body is not much covered by the cloth although some men and women wear it tied high up around the neck. There is no difference between the indoor and outdoor clothing. When imported needles and thread can be obtained they are used, but I have seen very skilful sewing done with a sharp piece of bamboo for a needle and thread made of pineapple fibre. Upon the death of parents, clothes descend to the children. In saluting a visitor it is not customary to remove a hat or cap, if one is being worn, or any other article of

clothing. The Fang do not use any coverings to protect the feet. Rank is not distinguished by the dress, very often the brightest and cleanest wrappers are worn by the young men while the *kuma* (headman) is often clothed in a dirty old rag. Very often the *kuma* wears an imported straw or felt hat obtained in trade, and this alone distinguishes him as headman of the town. Next to the possession of women and guns, a Fang man's great desire is to own "much cloth."

Personal Ornaments.

Head.—The Fang dress their hair in the same manner as the Bulu, and the way they build it up on the head over wooden shapes is often very remarkable and shows considerable skill. Very often the hair is built up over these shapes in ridges, the upper edge of the ridge having white shirt buttons fastened along it or brass headed tacks driven in. Wigs are used and very skilfully made. Very often the term wig would be a misnomer, for the ingenious contrivance made to fit over the bald head is often entirely devoid of hair, being simply a close-fitting skull-cap knitted with string made from the pineapple fibre. The wigs are usually decorated with shirt buttons or imported glass beads. The hair is frequently plaited and twisted into ringlets by both sexes; dyeing the hair is not practised. Beads and white shirt buttons are worn on the hair in large quantities, also large cowrie shells dyed with red wood powder. The beads and buttons are often sewed on pieces of goat or deer skin, a separate portion decorating each side of the head, connected by a string of beads passing across the forehead.

Moustaches are seldom cultivated, beards when worn are allowed to grow naturally; but both are frequently removed by depilation; shaving is not practised. Ornaments are frequently worn in the ears, and are usually suspended by a small cord passed through a hole in the lobe. Women and young girls when returning from work in the forest or gardens frequently cluster grasses, leaves of vines and fragrant herbs around their ears; it is a rather pretty custom. Certain fetish charms are worn suspended from the ear; women frequently use for an ear fetish the small quills from a porcupine's tail, and they say it will bring them children. Brass and iron ear-rings are also worn.

Males do not seem to feel inclined to ornament the nose, but many Fang women delight to do so. They pierce the triangular cartilage with a long slender bamboo pin: the pins sometimes project out three inches on either side of the nose. Very often a medium-sized porcupine quill is used as the ornament, in place of bamboo; it certainly looks better. Some women thus decorated look very repulsive. A female who is credited with considerable power as a medicine woman will almost invariably have the nose pierced and decorated. Ornaments are not worn on the lips or cheeks.

Body.—Men, women, and children wear necklaces of glass beads, the hoofs of very small antelope, and certain forest beans, are strung and worn around the neck. Bristles from the tail of an elephant are used for the same purpose. When

in mourning, a necklace is made from bleached grass plaited ; it is worn by both sexes. A very favourite fetish charm to suspend from a necklace is a leopard tooth. I have frequently seen the two tusks of a wild boar or "Wart hog" worn around the neck as an ornament and have succeeded in bringing specimens worn mostly by the women. Imported thick brass wire wound around the forearm from wrist to elbow is a very favourite armlet ; it is kept highly polished. Brass wire is often wound so tightly around the biceps as to seriously interfere with circulation. Broad pieces of beaten brass are worn on the arms, and ivory bracelets are much valued. Sometimes six or more rings of ivory are cut from a tusk, and all worn on one arm. Finger and thumb rings are mostly worn by the women ; they are made of brass, copper, or iron, and are usually very thick and heavy.

Rings are no indication of rank or marriage. It is not uncommon to see a woman with three heavy brass rings on one thumb, and eight or ten similar rings on the fingers. Narrow girdles of leopard, goat or deer skins are worn across the chest to support the native fighting knife and bunch of fetish charms. I have been visited by a bushman wearing no less than twenty-three charms.

Legs and feet.—Leglets and anklets of brass are much worn and sought after by women. Brass leg rings imported by traders are in great demand. There does not appear to be any special time set for commencing to wear anklets ; mere infants are frequently decorated with them. Some of the leglets are very heavy, and many women wear ten or more on one leg. These rings often fit very tightly and impede circulation, or chafe and cause nasty indolent ulcers. The ankles and feet often swell and become very painful as a result of insufficient blood supply. Toe-rings are of iron and brass largely worn, and fit so tightly that the ring is often deeply imbedded in the flesh. Usually only one ring is worn on a single toe.

Painting and Tattooing.

Painting.—The method of painting the body by smearing on redwood powder mixed with palm oil, so largely practised by the Bulu, is followed in the same manner but to a much less extent by the Fang. Soft portions of the redwood tree are pulverised and mixed with oil into a thick paste, and the preparation smeared over the entire body. Occasionally a red band is painted across the forehead. When in mourning, dust, mud, or white clay is frequently rubbed over the entire body. Much more frequent is the practice of painting arrow heads, bands, or dots. The pigment used is a dark blue colour, obtained I am told from a tree fungus. The Ngi or witch doctor, when at work, in addition to his other paraphernalia smears his body with white chalk. Except in the case of the *Ngi*, the only object in decorating the body by painting is to appear *mbung* (beautiful), and with the Bulu when asked the reason for smearing the body with red paint, they usually reply it is *abung* (handsome). Imported pigments are not used for body decoration.

Tattooing.—The custom of tattooing is much in vogue. I have not been able

to obtain any accounts touching on its introduction, beyond the fact "we learnt it from our fathers." No ceremonies are connected with it. There are no professional tattooers, but the natives frequently employ a man known to be skilful to ornament them. It is practised by both sexes; young lads are anxious to be tattooed because it makes them feel "real men," but the practice is not indispensable as a sign of manhood. The same blue pigment obtained from a tree fungus used in painting is mixed with ashes and employed for tattooing. The instrument used is a sharp piece of bamboo, a piece of sharp iron or a knife. The practice does not appear to be in any way connected with pagan worship. Social or family rank does not affect the designs employed. Fang tattooing is not always symmetrical, it usually commences with the face, and a favourite design on the cheeks somewhat resembles the bowl and stem of a straight pipe. Only one colour is employed. Tattoo marks and designs are mostly found on the face, chest, shoulders, arms and abdomen. Women frequently have the pipe pattern or a band across the cheeks, and occasionally upon the breasts.

Cicatrization is largely practised. Small incisions are made in the skin with a sharp instrument, frequently a steel nail from an imported packing case obtained from the trade house, the nail being flattened out into a small knife blade; or a sharp piece of bamboo is used. The juice of a certain herb is rubbed into the incised wounds.

IV.—*Habitations.*

The houses are built mostly of bark; beams and rafters are made from the strong branches of forest trees and bamboo; they are secured by bush rope. The entire structure rests on the ground. It is very rare to find a Fang house on poles, except near the coast. There is no regularity in size of houses, but the form and material used is common to all the tribe. The average Fang house or hut is a low dark building, 15 feet long by 10 wide, and with walls about 6 feet high; the roof angle increases the height inside. Each family has a house; it is used, day and night, by all members of the family. Travellers usually occupy the *abeng* (palaver house), and the headman finds them sleeping quarters at night. When the owner dies he is usually buried close to the house, and the grave levelled off and soon obliterated. The houses comprising a town are built together, end to end. Towns consist of two rows of houses, with the main road passing between them. The *abeng* (palaver house) is built across one end of the main road. A large place is often composed of several towns or villages in line, the limits of each village being marked by its palaver house, and having its own headman. The Fang method of conveying information regarding the size of a place is by stating the number of palaver houses it contains. Stockades are frequently used at the entrance to a town, especially if the people have a palaver (tribal war) with a neighbouring tribe. The palaver houses and dwellings are also frequently stockaded. The natives often show considerable foresight and shrewdness by making use of the natural advantages of a position in selecting a

site for their villages. The houses can be readily taken down and erected elsewhere. The earth floor is often beaten very hard, no covering is used. The beds are made of bamboo poles resting upon end pieces, supported by four forked corner stakes. The bed is raised about one foot from the ground. In most houses are four beds, two at each end on opposite sides, having a log fire burning between, the smoke escaping through the thatch roof. The furniture is all movable, and consists of stools, cassava bowls and boards, drinking gourds, fish nets, water gourds, various baskets and hanging bamboo shelves for drying fish and corn over the fire. Food, guns and powder horns are hung up on wooden hooks suspended by bush rope; these hooks are made by cutting a suitable branch from a young tree, having a strong crutch. No separate portion of the dwelling is set apart for sleeping or eating. There are no windows to a Fang house; at night one or more pieces of bark are used for a door. All the domestic arrangements are excessively filthy. Refuse from meals is unknown, everything is eaten, including entrails and skin of animals and fish. Before occupying a new house the witch doctor (*ngangan*) is usually called to perform the ceremony of propitiating the evil spirits (local spirits), and the *biang Ekuri* (fetish) is hung up and becomes the protecting fetish of the household. This fetish is hung up over the doorway outside. The houses are built entirely above ground, the roofs are made of split bamboo and covered with thatch made from the long tough blade of a swamp reed, or rush. This thatch makes a most excellent roof, and when well put on, it is able to withstand three years of the terrible rains which fall during the long wet season.

V.—*Navigation, Hooks, Nets, Fishing, Traps.*

The Fang use long narrow canoes. A suitable tree having been found is felled and trimmed, then hollowed out with the small native wedge. All the boats are open and both sides of the canoe alike. The women use the same canoes as the men and paddle them very skilfully. War canoes are made large and strong, but are otherwise similar in construction to the canoes in daily use. A kind of lugger sail is used and the natives sail a thin canvas very close to the wind. The baler used is made of wood; it much resembles a large flat sugar scoop and is common among tribes along the west coast. This baler is used most skilfully and with great rapidity by both men and women. In paddling, no fulcrum whatever is used. The men and women either sit or kneel, grasping the paddle handle in its upper and lower thirds they plunge the blade deeply into the water, and force the canoe ahead with great rapidity. One man, woman, or a child steers, using an ordinary paddle; the time kept while paddling is excellent, and is usually kept by one man chanting a Fang song, not unlike a white sailor's shanty, the paddling taking on renewed vigour during the chorus. The sails are usually made now of imported trade cloth, but I have seen them made from the native bark cloth. Only one sail is used and the canoes are able to beat up well against the wind.

The mariner's compass is entirely unknown, and when I have shown one, it was always spoken of as "the white man's *biang bial*" (canoe fetish). The Fang shapes his course by his knowledge of the river banks ; he never ventures more than three days' journey from his own town, and much dislikes the idea of losing sight of land ; therefore he seldom, if ever, attempts it. Certain canoes belong to the headman of the village, others to individuals. The canoes do not have houses ; charms are frequently tied to the bow, to appease the water spirit, and frequently a traveller in a canoe will throw into the river at certain places he passes portions of his food to appease the local spirit which he believes dwells there. The place where this spirit dwells may be in some large tree or rock on the river bank. At night the canoes are hauled up on the river bank and usually left unprotected. Large war canoes, if painted, are occasionally covered with a few mats. No special portion of a canoe is set apart for a chief, he is usually seated near the bow. Watertight compartments for provisions are not provided, food and articles of trade being carried in high baskets. Upon arrival of a canoe from a neighbouring town, the visitors are frequently welcomed with shouts of joy ; guns are fired and a dance given in the evening. I have seen canoes repaired by placing pieces of bark over the leaks inside and outside, the bark being secured with small hard wood plugs. No arrangement is made to prevent leaking.

Hooks for fishing are skilfully made of bamboo, the barb is long, very sharp and notched on both sides. The hook is secured to the fishing-line with string made of pineapple fibre. Foreign-made fish-hooks are now largely used ; these are much coveted, and considered a very staple article of trade.

Casting nets are used weighed with stones, iron, or lead, obtained in trade. The meshes are very fine and show much skilful and patient workmanship. A Fang will work well at anything which he can do while sitting in the palaver house. He can then work, smoke and talk ; any work requiring much bodily exertion on his part or elsewhere is relegated to his wives. Fish traps are made of split bamboo and much resemble the lobster baskets used by our own fishermen. Small streams are often dammed at high water, the dam being made of split bamboo, fastened together with bush rope until a very large screen is made, 10 or 12 feet in height ; this screen is staked across the stream at high water, when the tide falls the water passes readily through, leaving the fish in the river. The most disgusting sight among the Fang, is to see the women and children at low water walking in the mud, breast high, feeling for "mud fish." The large casting net is called *ewot* ; a small round net used for dipping in pools and along the river bank at low water is called *tan*.

VI.—*Metallurgy, Fire, Machinery.*

Metallurgy among the Fang is limited to the working of iron. The native word for iron is *Eki*. The Fang among whom I lived did not possess the knowledge of smelting, but I was told that "other Fang far away in the bush, especially the Nqui (dwarfs), dug the *minkok eki* (stones of iron) out of the earth, melted it, and

traded with the *eki* (iron)." Iron is put to various uses. Long bladed knives of various shapes and patterns are made, also spear heads, armlets, anklets, finger and toe rings. Small pieces of iron are used for bullets in flint-lock muskets. One of the most important uses of money among the Fang is the making of *beki*.

Beki is made up in bunches ten *beki* in each bunch ; a bunch of *beki* is called *ntet*. The amount of dowry paid in *beki* is usually counted in hundreds, *kuliki bi kei, ntet awom* (bring me one hundred *beki*).

A bundle of ten arrow heads is frequently used as an *ntet*.

A peculiar shaped adze is made of iron ; it is used for working wood, especially hollowing trees intended for canoes.

Pieces of iron are forged into axe blades (*ovon*).

The *mifik* is a short handled spade made of iron, used for digging in the gardens.

The art of casting seems to be unknown.

The bellows (*nkum*) used by Fang smiths are very ingenious (*specimen on table*). The feet are used to steady the bellows, whilst both hands work the goat skin covers and force air into the fire.

A block of iron is used for an anvil. Some of the natives are quite skilful at working iron. A Fang living near my residence often begged from me a round steel nail from a packing case. In a short time he would return with the nail transformed into a thin delicate knife or dagger, only the nailhead remaining intact. Very large fighting knife blades are made and beautifully fashioned, and ornamented with various punch marks.

I have never seen any native made wire. Imported brass wire is in great demand and mostly used as a continuous armlet. The coil usually reaches from wrist to elbow, and is considered extremely *mbung* (handsome), and kept highly polished.

Imported brass is obtained in trade and made into armlets, anklets, finger and toe rings. It is also used for ornamentation of guns.

Many of the natives are skilled workers of iron and fully aware of its value. I have never seen welding practised, but in working hot iron it is frequently plunged into cold water to make it *alert* (hard).

Fire.—In the far interior, fire is produced by friction, the simplest form of a drill being used, which is twisted rapidly between the hands. Along the rivers matches are obtained from the native traders, who bring up large quantities from the coast. The natives are always ready to trade for matches, which are again traded to interior tribes. Flints are only used on the hammer of the old flintlock musket imported for trade. Fires are almost constantly burning in the palaver houses. Two dry logs are kept constantly burning, they are placed end to end, when one log is nearly consumed it is replaced by another.

It is interesting to notice how the natives carry fire about. When on a journey in 1897 from Gross Batanga with a caravan to the Bulu country in the German sphere of influence, one of the men usually obtained a piece of burning

log from the last town where the caravan rested. This man kept the piece of wood burning by gently swinging it backward and forward, while marching along the path with his load. On one occasion I timed a native, and when we reached the next stopping place, after a three hours' tramp in the rain, the brand was still burning brightly, and it had been frequently passed from one end of the caravan to the other so that all who desired could light their pipes from it.

The Fang use fire in the ceremony of *going out of mourning*. I witnessed this ceremony once at Foulabifong. The widows of an old headman had put in the regular time of mourning and were now to be released. There were seven widows in all, three of middle age, and four young girls. A small fire of leaves had been lighted in the centre of the street, and on each side of the fire stood several young men armed with switches. The widows wore a very slender loin cloth. At a given signal the widows rushed toward the fire and bounded through it, the young men switching them as they passed, but the switches were not used severely. Immediately after the switching, each widow seated herself on the ground holding a bunch of burning leaves under her feet, while a young man shaved their heads with a sharp trade knife. On inquiry regarding this ceremony, I obtained the following information: Passing the fire *cleans* them after mourning (evidently considered a means of purification). Switching reminds the widows of their duty to the man who inherits them as his wives. Burning has two meanings: firstly, the pain caused is endured as a last act of mourning for the departed; second, it signifies that henceforth the widows walk a new path (enter upon a new life).

Fire has a place in Fang religion or belief. The sun is considered the *tata* (father) of all heat, and the original maker of all fire, whether by friction, matches, powder, or lightning. When a severe thunderstorm is at its height, the natives say of the lightning, "that the sun has hid his face and is shooting fire, because he is angry." The native word for sun is *jo*. Although the palaver house fire is kept burning, still, no special effort is made to keep it alight; should it go out, any person present is at liberty to rekindle it from newly produced fire.

VII.—*Customs.*

The Fang have no system of law, no judge or tribunal for punishment of crime. Theft, murder, offences against the person are all settled according to native custom.

Example: A Fang of the Eisisis clan steals goods or a woman from a Fang of the Nge clan. The Nge who has been wronged does not go to the offender for settlement, he goes to another near town and shoots the first goat he sees in the street, or if very angry, he may shoot a woman. The owner of the goat or woman demands of the Nge his reason for doing so. The Nge replies, "An Eisisis" (giving the man's name) "has wronged me; I put the palaver (his offence) on you." The third party then goes to the Eisisis and says, "An Nge" (giving the man's name) "has shot my goat (or woman) because you have made trouble with him; he has put your palaver (trouble) on me. You must pay me!" The original offender is

now responsible and liable to two parties ; if he is reasonable they all meet and talk the palaver. If the palaver is serious, each party appoints his *ntol* (ambassador). The palaver is usually talked in the main street of the town, before all the representatives of the interested clans, and before all strangers in town. The Fang are born orators, and remarkable gestures and orations are made while talking the palaver. The speaker usually walks backwards and forwards grasping and leaning upon a "palaver stick." He commences with : *M'zona* (I say thus) ; when speaking for another he says *A'zona* (he says thus) ; when speaking for the people of his town, *Ba zona* (they say thus). Sometimes the *ntols* (ambassadors) sit in a canoe in the middle of a river or a stream, and talk the palaver, the injured parties being on either side of the stream. The case is talked, the goods demanded in payment stated, and an effort made to *kik nsang* (cut or end the palaver). If they succeed, then the palaver is *cut* (ended), and a dance follows ; if no agreement is come to, the meeting breaks up and a tribal war exists between these clans.

Salutations.

There are three salutations common to all. Two friends meet, they each grasp the arm of the other, high up on the biceps ; a slight pause is made, then the hand is slipped down to clasp the wrist. This is also the customary salutation used by the Bulu.

Two friends meeting salute by embracing.

A traveller entering the *abeng* (palaver house) walks over to the headman and sits on his knee a moment, at the same time placing one arm around the headman's neck.

Hospitality demands that all strangers be served food by the town women to strangers in the *abeng*.

Wives are loaned to guests.

Coarse conversation is indulged in by old and young of both sexes.

Considerable license prevails among the unmarried ; less so among the married.

VIII.—*Invention, Natural Forms, Conservatism.*

Invention.—The arts in use are common to all the different clans of the great Fang tribe. Any new discovery as the working of iron is credited to the dwarfs or *nqui*. The natives are always ready to admit that the *nqui* are very clever ; they have a saying "no person knows like a *mon nqui* (dwarf) what is inside the forest." When obtainable the natives use an imported saw, or file, and admit its superiority over their own crude tools. A Fang may be impressed at the knowledge and power of the white man, but is not greatly surprised ; the reason for this is that many white men are credited with possessing supernatural powers.

Some of the clubs, tools and weapons approximate to the natural forms of the branches or roots of trees. Axe handles and the handle of a certain kind of adze have

the natural curve of the branches. Stones are employed for rolling food, especially for crushing and rolling the *ngon* seed. Shells of large land mollusca are cut in half and used for spoons, small gourds being used for the same purpose. Large gourds are used for water dippers and bottles. Very many uses are found for the forest gourds, not the least ingenious being the use of a hollow stemmed gourd for administering a rectal injection. Gourds are used for the sounding boards of the musical instrument called *mruk*. The people find many uses for bamboo. It is used in construction of houses, fish baskets and traps are made from it, fences to protect paths during tribal wars are made of sharp pointed bamboo poles; and small sharpened pieces of bamboo with poisoned tips are buried in the forest paths, point upward, to wound and poison the naked feet of an unsuspecting enemy. The teeth and claws of leopards and bush cats, elephant tail, antelope feet, horns and forest beans are used in their natural form as personal ornaments. Leopard teeth are always considered valuable as *biang* (fetish) and are much sought after; they are frequently imitated in ivory. I have not seen the defences of animals employed as artificial defences, except as fetish. Long tough forest thorns are often used as awls and needles for piercing and sewing skins. I once saw an *ngangan* (witch doctor) perform a post-mortem examination on a woman. After he had discovered the cause of death, which he announced to the expectant crowd as being due to "six witches eating her liver," he first pierced the abdominal walls with a long hard thorn, and then sewed up the body with a bamboo needle threaded with pineapple fibre. I have seen only one cave dwelling; it was used by an isolated sufferer of the dread disease called by the natives *mabata* (a kind of sloughing phagedina). When proper reed material for making thatch is scarce, large forest leaves are used, but they make very poor roofs, especially during the tornado season.

Conservatism.—The Fang are not quick to adopt reforms or to introduce new methods; they are more or less the slaves of custom, and have a superstitious dread of departing from ancestral habits. This refers to all the proceedings of life. Fang living in towns near Gaboon are almost daily coming in contact with white settlers, and to some extent, at least, appear to be changing their mode of living. It never appeared to me that a Fang had the same longing to be "just like a white man" as possesses the young Mpôngwe and Benga men.

IX.—*Ornamentation.*

The patterns mostly seen in Fang ornamentation consist of bands, incised lines, elliptical punch marks, herring bone, lozenge pattern and cross lines. The natives do not possess a natural aptitude for drawing, and seldom attempt it. The few drawings I have seen on the bark walls of houses, supposed to represent men and women, were very crude and exaggerated in proportion. They have no idea whatever of perspective. They seem to interpret foreign drawings very readily. The Fang show considerable skill in plain wood carving, using an ordinary native knife. I have noticed that their carving improves very considerably when an imported pocket knife is the instrument employed.

X.—*Food. Cooking.*

Food used by the Fang is precisely similar to that of all other tribes inhabiting the great zone of palms and bananas as described by Humboldt. Added to these ordinary foods of the Fang is their liking for human flesh, indulged in to this day in spite of the law, which is often powerless to reach and punish the offenders. Cassava, *mbœ*, plantains, *bikon*, crushed gourd seeds, *ngongon*, corn; *mekobe*, a most nutritive tuber, sweet potatoes, yams, palm oil, bananas, snails and various mollusca. Fish is wrapped in plantain leaves and boiled, or set on hot ashes and fire piled on top of the *bundle* of food. All kinds of meat is eaten, from deer down to the smallest bush rat; snakes are considered very good meat. No portion is wasted, every morsel of skin and intestines are eaten. Goats and chickens are raised for food and trade. Corn or other cereals are not used for the purpose of making bread. Milk is not used. Preparations of milk such as butter and cheese are not made. There is a marked preference for meats. When an animal is slaughtered, women bring wooden bowls to collect the blood in. The blood is often cooked mixed with palm oil. A Fang will eat almost any kind of known food and at any time, providing it is not his *Eki* or taboo, given him during infancy, prohibiting the eating of a certain kind of food, unless partaken of under certain conditions. Except for the *Eki* men, women and children partake of the same food. The Fang are improvident. When on long journeys they often chew a piece of Kola nut, but more commonly chew pieces of a certain root; it has several different names. Palm oil is extensively used in cooking. Salt (*nku*) is much enjoyed and sought after in trade. Sugar is only used in the form of sugar cane and eaten uncooked. The chiefs, or rather headmen, have no special form of food. Eating earth is not indulged in. So far as I am aware, all fish, flesh and fowl is cooked before being eaten. Flesh is often extremely high, at times positively bad, before it is eaten, but not one morsel is ever wasted.

Fish, fowl, bush rats, snakes and all kinds of meats are smoked or sun-dried; food prepared thus is carried on journeys in the bush wrapped in leaves and eaten with *mboa* (cassava) without any further preparation. Permanent ovens for baking are not in use. Meat is roasted on small spits over the log fire or wrapped up in leaves and hot ashes banked around and on top of it. Native vegetables are frequently cooked with meats, plantains are usually boiled separately or roasted close to the fire. Most cooking utensils used by the Fang near the coast are iron or brass pots, imported by white traders; but farther inland the native pots are much more in vogue. These native pots are made of grey clay and sun-dried; they become harder and stronger by use, and vary in size and capacity from a pint to about three gallons.

Cooking vessels are not kept very clean, being simply rinsed out with a little water; but if the vessel is a brass trade pot or kettle, it is usually taken to the river or a near stream, and scoured bright; but I fear the chief reason for doing

this is, because, to a Fang eye, polished brass looks *mbung* (handsome) and is attractive for trade. Vessels are usually placed on top of the fire and not suspended over it; vegetables are frequently placed in stews. No separate dwelling house exists for cooking, it is carried on in the dwelling house. The water used to wash a dirty pot with is often thrown out on the earth floor of the dwelling, children playing in the wet dirt. In all domestic matters the Fang are very filthy. I have on more than one occasion when inside a native hut seen children micturate and defecate on the earth floor close to where the mother was cooking, the women and men present taking very little notice, and only occasionally placing the child outside the door. Cooking is exclusively the duty of women, a *real man* will not cook. Food is often highly seasoned with hot native red and green peppers, and food thus prepared is much appreciated. The food is usually well cooked through, with the exception of plantains which are often only half boiled and served quite hard. Large round stones are used for rubbing and reducing to powder gourd seeds and various tubers. Smoking and salting are the only methods practised for preserving food, and on account of the value of salt and the difficulty of transporting it inland, it is seldom thus employed.

Drinks.—Rum has been carried from the coast by white traders and natives far inland and is used whenever obtainable, but the chief drink is cold water. Palm wine is made called *meyak*. Except in places where a trade factory existed I have seen very few cases of intoxication among the Fang, but when they can obtain rum it seems to completely demoralize them. Tea and coffee are known to people living near white settlers. When a party of headmen and others have taken a meal at the mission house, tea and coffee were greatly enjoyed and cups frequently re-filled. The first meal is usually about eight or nine o'clock; the natives think the white man eats very early; a mid-day meal is served and the evening repast is usually about sunset.

Food is frequently brought to the men inside the *abeng* (palaver house); at other times an entire family eats together inside the dwelling house. No ceremonies whatever precede the commencement of meals. When a son is born, or on the occasion of a wedding, and after some large palaver has been settled, a feast is usually given. Invited guests and strangers partake together with the town folk of the food prepared; it is usually served on the earth floor of the palaver house, on plantain leaves, and in cooking pots, each person helping himself. The women do not eat with the men inside the palaver house.

Mode of preparing Mboa.

Ba du mbóá osui, e vóm a ne ndátál : a kaga boma mélú mélá, be keli tás : be sáli ne nye : be náü mbük : be kézi nye mbük iti be nou ntum : beña tyak : bënga vul : be kaga mana vul : be kézi nyc è mvé : vekoba ji : ve telé mvé mboa : wena mboa abea.

Translation.

They put cassava to soak in the river, in a place where there is (plenty of) mud. When it has lain there three days, they go and rub off the rind. They bring it (to the house). They take a trough, and put the cassava in it. They take the mashing stick. They mash the cassava. They wrap it up (in leaves). When they have finished that, they put it in the pot. Then they light the fire. They put the pot of iguma (on the fire). Then the iguma is *boiled*.

Azo Mfini: (Plantation).

Betata basa leua bo dia inifini (our fathers did not make plantain villages), *n'afan eto bë* (because their land was near at hand, *i.e.*, near the regular village). *Fañ b'anyeye infini ne bo bidji binne* (Fañ likes plantain village to make good food, *i.e.*, because thus they get good food). *Bikón e djel ine, betok* (Plantains in town have (one) small). *Infini O ne djal moe afan bibë* (Plantain village is a good town (because) land (*i.e.*, good land) near). *Nson ane afan betata benga to bibë* (Like the land where the fathers were near). *B'angéye infini, ne dzi bidji binné*. *Mo'mbok a gouevi bstiyit: bevolk benga sôm* (They like the plantain village (because) there they eat good food. One person kills game (meat) others buy). *Menda infini me vie bo abé* (Houses of plantain villages soon spoil).¹ *Fañ, Ba'dji asas mbôa kidiase* (Fañ they eat a meal of cassava in the morning).

Regarding the *Eki* taboos certain foods or performance of certain actions as in vogue among the Fang, I learned from a friend and *confrère*, Rev. R. H. Nassau, D.D., M.D., of Gaboon, that the *Eki* of the Fang is precisely similar to the *Orunda* of the Mpôngwe. Dr. Nassau is a veteran missionary of thirty-seven years' African experience, and he is always ready to help others who are sufficiently interested in the natives to inquire about them. I know of no one on the West Coast more willing or eminently able than he for imparting information regarding the people among whom he has laboured.

XI.—Anthropophagy.

Cannibalism prevails among the Fang beyond question, and only fear of the law keeps him somewhat in check. I am able to speak of the Fang as anthropophagi; not alone from information gathered, but from having once had the opportunity of visiting a town two days after a victim had been killed and eaten.

This town, named Olunda, is on the right bank of the Nkomo river, about 60 miles from the seat of government in the Congo Français. Whilst visiting the town Nenge-nenge (the island of islands) in the autumn of 1898, a native trader named Arkendengi, employed by a British trading house at Gaboon, informed me

¹ It is very true that houses having plantains growing near, soon rot; this is due to the dampness caused by loss of sunlight and heat.

that a man had been killed and eaten only two days before at the town of Olunda two miles below Nenge-nenge. Old king Kelun at Nenge-nenge confirmed the report, and in compliance with my request, loaned me an interpreter to accompany me to the place.

The tide being favourable, I decided to start without telling my boat boys the reason for my hasty departure. Olunda is quite close to the river bank, but upon our arrival the water had fallen so low that the only way to reach the town was by wading knee deep in mud up the bank. The people eyed our boat and myself in particular with marked suspicion, and much talking was indulged in during our landing. The headman was the most villainous looking specimen of a Fang I have ever met; he was well built and very muscular, but his face was extremely ugly and brute-like: he had only one eye, and an evil-looking one it was. He wore on his head an old red worsted trade cap, and smoked a dirty native clay pipe.

The object of my visit was well hidden, and we chatted on various matters in the palaver house. When I expressed a desire to walk through the town and treat any of his sick people, the headman said, "No sick here, people all away, let us talk in the *abeng*" (palaver house). However, without giving him any notice I presently left the palaver house and walked out into the main road, and the crowd followed. The headman repeatedly assured me that the town was not worth seeing; but I strolled leisurely along. Half-way through the town I noticed a quantity of intestines strung out to dry on sticks, and to the great annoyance of the headman and people, I made an examination of them which convinced me that they had been removed quite recently from a human body. I was assured that they were *entrails from a deer* and were being dried for the purpose of covering gourds to hold gunpowder. I then told the people the reports I had heard, also that I knew the intestines then drying were human, and accused them of cannibalism. They were very indignant, and declared, as all Fangs do, that their tribe never eat men. "Oh no, people in the far bush did, only bad Fang did so." A few moments later I picked up a human clavicle in the palaver house and took it away with me, threatening to report the matter to the Government.

In the palaver house of this same town was a boy of about sixteen years, in chains, held as a hostage. I arranged to return in a few days and try to bring the lad to our mission station, but upon my return I again stopped at Nengi-Nengi, and then heard that the boy had been killed and eaten shortly after my departure.

I am inclined to believe that the reason for eating human flesh by the Fang is the result of a craving for animal food. The victims are generally males captured either in war, or members of other tribes waylaid and killed while journeying in the bush.

A Fang man told me that once he ate "some man" because he was persuaded to, and that it "passed goat far" (much superior to goat). He added, "I never do

so now because I known it's wrong." His latter statement I gave very little credit to.

Fang who admitted to me that "bad Fang eat men, but not the people of their town or tribe," asserted that all parts of the body are eaten; that the victims are not considered as sacrifices to any gods, but that the bones are used for *biang* (medicine).

Human flesh does not form part of the regular food of the people, and to a certain extent the natives seem ashamed to admit that "other Fang eat men"; they never admitted to me that any of *their tribe* did so.

XII.—*Religion, Fetish or Biang (medicine).*

These anthropophagi have some idea of God, a superior being, their *Tata* (father) *a bo mam mesese* (he made all things). *Anyambi* is their *tata* and ranks above all other Fang gods, because *a'ne yôp* (he is above, lit. lives in heaven). The Fang have other or minor gods, the greatest of whom was *Sekôme*, and many Fang say *Sekôme* and *Anyambi* are one and the same god; hence the saying "*Sekôme anga kôm mam mesese*" (*Sekôme* he made (arranged) all things). The following is a list of Fang minor gods:

- Nzame.
- Mabeka.
- Nkwa.
- Sekôme (reported as being *Anyambi*).
- Ube.
- Nzame begat Mabeka.
- Mabeka begat Nkwa.
- Nkwa begat Sekôme.
- Sekôme begat Ube.

The Fang have no religion in the generally accepted meaning of the word, for it is mostly made up of an unlimited and disconnected chain of superstitious beliefs.

The key-note of the superstitious beliefs of the Fang is that the Present and Future is filled with innumerable numbers of spiritual beings. The great spirit *Tata* (father) *Anyambi* or *Sekôme* is considered indifferent to the wants and sufferings of men, women and children. I do not believe that worship is directed in any way whatever to the spirits of Present and Future, the natives seeming rather to consider propitiation, exhortation and supplication as the three things most essential and necessary. The spirits of Present and Future possess to a large degree the better human passions, and also the baser ones. The origin of these innumerable spirits of Present and Future is extremely vague: *Anyambi* or *Sekôme* is credited with having created many; others are the souls of dead relatives, still retaining after death human sensations and desires. The Fang have the same

idea as the Bulu regarding two great gods. The *Zambe* of the Bulu is the *Anyambi* or *Sekôme* of the Fang, the *tata* or father of all things; and another god of less power than *Anyambi* or *Sekôme*, who lives in the forests and is so tall that he gathers fruit from the highest trees. Some of the old men and women profess to have seen this god of the forests.

Fang superstition includes transmigration; a departed human soul may enter any animal dwelling on top of the earth or in it. There are spirits of health and disease, also a protecting spirit belonging to a clan or tribe, in whose honour a small basket is hung in the palaver house, containing portions of the skull of an albino, whenever obtainable, also portions of the skulls of a relative and a chimpanzee, human hair, nails and bones. This fetish or *biang* is called the *Biang Akamayong*. Most Fang have a cabalistic word assigned to them by the *ngangan* (witch doctor), and this word is used as a prayer. During the new moon, dances are nearly always indulged in, and the songs usually addressed to the spirits of Present and Future. Local spirits need constant propitiation; a native passing in his canoe a spot where a local spirit dwells, as a large rock, will pay his respects by casting a piece of his food into the river, or when in the forest a few stones or a piece of *mbôa* (cassava) is laid at the root of some great tree.

Wooden idols are not plentiful among the Fang tribes living along the rivers; they are seen more in the palaver houses of the bush towns.

Charms.—These may be only cabalistic words, and under this head of vocal charms must be included the incantations of the *ngangan* (witch doctor).

Material charms.—These are by far the most common; the belief in material charms, fetish, occupies the most prominent place in Fang religious contemplation.

Among the Fang, the English word Fetish, from the Portuguese word *Feticio*, is *Biang* (medicine). A Fang fetish is any material object which the *ngangan* (doctor) has consecrated and made a fit abiding place for a spirit. What may be consecrated? Anything, absolutely anything; a shell, rag, stone, twig of a tree, horns, nails, etc. The horns of small antelope and large deer are filled with resins, nails, human hair, faeces, etc. To bewitch a person it is necessary to give the *ngangan* a piece of the hair, nail, a portion of the food or a drop of blood of the person to be bewitched. A Fang is most careful if he cuts himself to see that only friends and relations approach him until the bleeding has ceased, and hair when cut is usually burnt without delay. As mentioned in the section of this paper on food, every child during infancy is subjected to certain rites which constitute his or her *Eki*, prohibiting the child from eating a certain kind of food or performing a certain act. Thus far, the superstitious beliefs of the Fang and Bulu are precisely similar, and I gathered from Dr. Nassau at Gaboon many facts connected with the people among whom he laboured, the Mpongwe, which showed that they also held superstitious beliefs very nearly, and in some cases precisely similar to those of the Bulu and Fang, the only difference being in the

name, the *Eki* of the Fang being the *Orunda* of the Mpongwe. One day when on a journey among the people, I asked an old headman to share with me a chicken my boy had prepared for supper; the old man seemed pleased at my invitation, but asked the boy if it was a hen or cock fowl. Upon being informed that it was a cock, he declined to eat any of it; that was his *Eki*. As previously stated, I do not believe the natives worship the spirits of Present and Future, but to a certain degree ancestral worship does exist. A Fang places the skull of his father in a curious receptacle of bark, worshipping it, killing fowls and making blood offerings to it, and in many ways the whole matter somewhat resembles the worshippers at graves and before ancestral tablets as practised in China. The natives often pray to their father's skull before talking a large war palaver, or the purchase of a new woman. As worshipping departed ancestors is the chief duty of a faithful Chinaman, so making offerings and prayers to the departed father's spirit before the skull constitutes the great Fang fetish, or *bieti*. Wooden idols, *biycme*, of men and women are made in a manner which makes the sex extremely apparent; yet whenever I have seen these figures in towns, the people did not seem to regard them as obscene, but as truthful representations of the sexes. I feel sure that to some extent, at least, phallic worship is practised among the Fang. Spirits are everywhere; in rocks, trees, forests, and streams; in fact, for the Fang, this life is one continual fight against spirits corporal and spiritual.

A peculiar belief regarding dreams is that when a person sleeps the soul often wanders away, and its experiences on these journeys are made known to the sleeper by dreams. After death the soul may inhabit any kind of animal.

Fetish Biang (medicine).—Fetish means anything; leopard teeth, human finger nails, hair, wood, iron, herbs. The article used as *biang* or fetish, has no intrinsic value, it is only valued because of connecting its owner with a spirit which can aid him. The leopard tooth fetish is supposed to impart the bravery of the leopard to its owner. Fetish is a spirit or combination of spirits manifested in material things.

Dili Mkuk.—To murder a person and save his skull as a fetish, or use the skull as medicine to bring women, guns, goats or goods. The people will make offerings to the skulls calling them by the names of persons killed. It is said that these prayers are always answered as desired.

Biang e Soli (hiding medicine).—A man goes and takes leaves of trees, and cuts them up. He says, "I have cut up leaves of trees" (or high grass, bushes). The women shell gourd seeds and mash them. They catch a fowl, kill it, and put it in the pot. They also put in the pot the medicine leaves, and the mashed gourd kernels. They put the pot on the fire, and boil (its contents). When they have boiled it, the medicine is cooked. They take the medicine pot off (the fire). They go and put it by the side of (*afuñ*) the back of the *bieti*. The man who has put it there says to the *bieti*, other people want to kill me. He takes away the medicine pot. He opens the *bieti* basket. He takes a small piece of the bone (instead of this say to the woman and children he takes the excrement of the

bieti). He brings it. He eats the fowl. When finished, he takes a bone of the fowl and the excrement of the *bieti*. He cuts his nails and his hair. He ties (all these things) up in a bundle or packs them inside the horn of a small deer and keeps it.

When a man goes on a journey he carries this medicine with him. Another person cannot see him as he journeys.

This is the *Biang e Soli*.

Biang-nkama.—The people get up and take machetes and cut a clearing. When they have finished the clearing is open and bright. If a man has died and been long in the grave, they take his bones, and lay them out on the ground. They cover them over with earth. They take other bones, and cut them up into small pieces. They put (these pieces) in a basket: they put in also red dye, and scrapings from the bark of trees. They close up the basket. If they go to war, they carry the basket (suspended by a cord from) the shoulder. They take the red dye which is in the basket and smear the body with it. If an enemy (literally, a person) fires a gun (at them), they will not be pierced (by the pieces of iron pot used as bullets).

This is the *Biang-nkama*. Do not tell it to women or children; only to grown real men—for it is tabooed.

Nzake Bukun.—Fang make it thus. If a man makes witch medicine, he kills his brother and other people. They say, let us make *nzake bukun*. They take a corpse, and go with it to the bush. They cut bush. The bush is clear and open. They sweep clear the place which they have cut. They lay down the corpse in the place which they have swept. They dig plenty of dirt, and make it in the shape of an elephant (over the corpse). They make the trunk, the tusks, the eyes, the legs, the tail, the ears. They finish and return to the town. They say, we have made *nzake bukun* (*nzake* means elephant). They say if a man goes out to kill by witchcraft, he will die. If a man wishes to kill another with poison, he will die. If a man lies with a woman in the daytime he will die. Let not a woman eat a pig. And so they say, they have made this fetish, the *nzake-bukun*. When they have done so, if a man lies with a woman in the daytime he gets sick. They go and scrape trees in the bush; they bring water from the river, and put the scrapings in the water. They catch a fowl outside and put it in the medicine-water. They touch the man's body over with the fowl. And so that man, they heal him from his fetish-sickness. Then he is well.

This is *Nzake bukun*.

Biang-abationg.—If a man has married two or three women, and loves one, but dislikes the others, the latter feel badly. They make *biang abationg*. When they go to pass their faeces, they take a very small piece of their faeces. They rub off the grease from their skin, and mix this grease with the small piece of dung. They put it (the mixture) on the drying-shelf (over the fire). When it is dry they mash it to powder, and put it in the neck of a gourd. They take also a shrub called *abaton* (known only by women) and put it in a small gourd (not the neck of

gourd mentioned above). They put oil in it. They keep it hidden. No one else is allowed to see it.

When the woman cooks food for her husband, she takes the medicine, which she puts in the neck of the gourd, and puts it in her husband's food, then his heart is changed. In the evening the woman smears herself with the *abatoñg*, which she had put in the small gourd. When she and her husband lie down, if she touches her husband, the medicine which she has eaten makes his heart change. Though he liked her before, now he loves her on account of the *biang-abationg*.

This is the *Biang-abationg*.

Biang-mikal (adultery medicine).—People go and scrape medicine in the bush. If they come with the medicine, they put it in the pot. They put water in the pot. They go and catch a fowl. They cut the fowl's neck; they put the blood in the medicine with the scrapings from trees. They take medicine that is in the water, they pour it on the person's head. They also take a certain medicine called *ngwcia* and rub it on the face of the sick person. They again rub it on his belly. Then they have cured the person of the *mikal*. The fowl used is not to be eaten by the sick person, others may do so. Then he is healed.

This is the same medicine used to detect adultery. If a person commits adultery with another man's wife, and then speaks a lie denying the affair, the person accused must drink the *biang-mikal* to show the people he is innocent. If he is guilty the medicine makes him sick, and he dies or trouble comes to his people. If guilty, medicine is made to call the curse back.

This is the *Biang-mikal*.

Biang-ndona (medicine for young men, eloping medicine).—If a person goes on a journey and sees a virgin, he courts or loves her. Then the virgin accepts him. He and she go and lie down. The young man says, "Let us go in my town." If the virgin does not accept, then the young man tries to persuade her. The virgin says, "I go later." The young man says, "If you go later, give me hair for a souvenir." Then the virgin scratches over her heart. She takes the hair of her head and the blood from the scratch over her heart and gives it to the young man. He goes to his town, he says, "I'll first make medicine." He takes the hair and the blood. He takes a small piece of witch medicine. He also takes plenty of leaves. He puts the small piece of witch medicine with the leaves. The hair and the blood he also puts in the leaves. He mixes all in the leaves. He hangs them in the *bieti* basket. He says, "Bieti, I want to marry a woman. Take her for me." This eloping medicine hangs one day. In the morning he cuts medicine and puts it on top of a tree. He leaves the medicine on top of the tree. He goes again to the young virgin. He says, "I have come, I come to take you." The young virgin says, "I will go to-morrow." He sleeps. The young man when day breaks says, "Let us go." The young virgin says, "I will surely go." Then the young man elopes with the young virgin; he comes with her to his town. Father of the young virgin he comes vexed. The young man kills a goat for the father of the young virgin. They finish eating the goat. He (the father) sleeps one day. Next morning the young man

gives him (the father) the *beki* (dowry). The father of the young virgin takes the goods to his town; the young man remains in possession of the woman.

They marry with *biang-ndoma*, eloping medicine thus.

This is *Biang-ndoma*.

Biang-akong (war medicine).—Told me by Fam-deu, a Fang, Eisis clan, at Foulabifong, Nkomo river, April 19th, 1898. This *biang* was illustrated to me; a leopard tooth is the *Biang-akong*.

Make a bowl of war medicine, of leaves, roots, and bark. Call all people of the town. Drop the leopard tooth into the medicine. If the point of the tooth looks toward the people we have a palaver (trouble) with, then we must go and fight and we will win. If the root of the tooth points toward the people we have a palaver with, then we must *tabe si* (sit down) or our enemies will win if we go to fight them.

This is the *Biang-akong*.

Biang-akamayong.—This *biang* is the protector of the tribe or nation (*ayông*, tribe).

Told me by Esôya-ôvum, the headman of Foulabifong on the Nkomo river, who sold me the complete set of the *Biang-akamayong* belonging to the dead headman "Commisan." I present this *biang* for your inspection this evening. The tin canister was obtained from a white man and is used in place of the usual basket to carry bones in. It contains portions of the skull of an albino (male), portions of the skull of a *mon nguri*, young chimpanzee, red powder and a variety of native medicine.

This *biang-akamayong* is always carried by the headman of a town during war.

A bell hangs from the bottom of the canister containing the bones; it rings when the headman walks.

Nko.—The small horn belonging to the *biang-akamayong* has *ngom* (porcupine tail) in it, also native medicine. It is used to cure people having witches. A bowl of medicine is made. The *ngom* is dipped in the medicine bowl and the sick person sprinkled with the medicine. Then the witch departs.

At this point the headman Esôya stopped talking. He said, "The children who have gathered around your house must go away; no real man dare talk about the *biang-akamayong* before women and children." I told the children to go and Esôya continued.

The whistle.—This is part of the *biang-akamayong*; it has been cooked (boiled) in the medicine bowl and has great power when used by the headman in calling the men together after a fight.

Moul.—This is the large horn with a piece of looking glass on top. This horn contains much medicine, and next to the bones is the most important part of the *biang-akamayong*.

The two small antelope horns, and the small bundles of medicine, are *biang e soli* (hiding medicine); it makes the person carrying the *biang-akamayong* invisible to the enemy.

The skin of a bush cat is part of the *biang-akamayong* called "Nsin."

The Mvang.—A triangular piece of iron filled with medicine, used to keep away witches, is also part of the *biang-akamayong*.

Biang-akong or *biang-abal* (war medicine).—This is also part of the *biang-akamayong*, and the shots from the guns of an enemy are of no avail.

One other important fetish hangs with the *biang-akamayong*.

A piece of very hard wood. Only a certain kind of woman is selected to find this wood; she is called a special or *selected* woman on account of certain peculiarities connected with her, *e.g.*, she always fails to catch fish, she may try all day but will not succeed in catching fish. The husband of such a woman, after intercourse with her, fails to catch fish the next day, he also fails to work. This is the kind of woman always selected to find this wood; it is hard wood, she is a hard woman, and she is called *Emunega ane alert* (the woman who is hard). This medicine is also called *biang-akong*, and shot from the guns of an enemy will not harm.

This is the *Biang-akamayong*.

XIII.—*Witchcraft. Evus. (Witch.)*

If a person goes out to make witch (witch medicine, or play witch to harm others) he dies. The people take him to the backyard. Other people say, "We want to take the witch." If the corpse is a female, they open the belly. If the corpse is a male, they open the heart. They see the witch, they take it. If they bring the witch, they lay it on the smoke shelf. It dries. When finished drying they say, "We will use it as medicine."

This is *Evus* (witch).

Cursing dead Relations.—Written at Foulabifong, Nkomo river, April 13th, 1898. Told me by Ôvôn; fully confirmed by Ogandaga and Interpreter Roby.

Ekanesong (to curse dead relations).—This is a Fang custom. A man has a palaver with another, or goods stolen. He desires to get even with the thief. He calls a friend and curses his friend's dead relations, saying,

"Go and kill that person for me, or go and make him pay me goods; if you do so, I will then pay you for having cursed your dead relations." It is a serious matter to have dead relations cursed, and the friend feels very bad. He must do as bid, or he is branded as a coward, and after he has completed his task he then makes claim for payment.

Nge me bā jam dili, nge me ta minbin (If I do it, may I see the corpses [of my people]). A Fang way of swearing an oath.

Ami ye mimbim mia, yinga me bat (My friend, by the corpses of your relations, kill those people for me).

Notes on *Ebômeda* (a curse).

Ilong z'ayoge (a curse that kills).

Vazege me ilong onga lóm me (Take away the curse you have [sent] put upon me).

Vazege me bibomeda (Take away the curse).

Vazege me biyoge (Take away the curse).

Bót bene mbómeda eb Anyambe edjam e mam mebē móa (People are cursed of God on account of their sins).

XIV.—*The Ngi. (A Fang Secret Society.)*

To members (*bemvon*) the following things or *bityi* are forbidden :—

Bityi :—

1. To go and make or play at witch (make *evus*).
2. A male fowl is not to be eaten (shared) by two men of different clans.
3. Fish called *ngole* must not be partaken of with a woman.
4. Only the initiated are permitted to eat the fish called *ngone*.
5. Only the initiated may witness the Ngi dances. A woman who attempts to witness an Ngi dance will sicken and die.
6. Only the initiated must know about the bones used by Ngi.
7. A member of the Ngi society is not permitted to sleep on his back.
8. Food refuse must not be destroyed by fire.
9. To spit in the fire is against the law of Ngi (not permitted).
10. An uninitiated person will die if embraced by an Ngi.
11. To kick over rotten wood, logs, or forest stumps, is forbidden.
12. To cut a stick half through in the bush, and then bring it to town and break it, is forbidden. It must be cut through and the two pieces carried.
13. To kick the feet together after getting in bed, for the purpose of removing dust, is forbidden.

The violation of any of these mentioned *bityi* will bring misfortune and death on the *bemvon* (member).

Ngi means gorilla among the Fang; Nji means gorilla among the Bulu. The Bulu have the Nji secret society, which is reported as being precisely similar to the Fang Ngi; it came to the Bulu from the Fang.

XV.—*War.*

During a tribal war all adults act as warriors. There is no regular organisation of fighting men. It is a typical guerilla warfare. Parties of young men go forth at night to attack towns; others watch the forest paths to shoot men passing and women going to work in the gardens. The Fang are noted for their love of war; they are the most warlike people in all West Africa. When a tribal war is on, a headman frequently goes out with a raiding party to attack the town; he carries with him the *biang-akamayong* (protecting medicine of the tribe). The usual mode of attack is as follows: Having decided to attack a town, the party of men (usually ten or

fifteen) take their flint-lock muskets, heavily loaded with trade powder and a handful of broken iron pot (iron trade pots) or small stones, and creep up close to the town after dark. Two men try to enter the town unobserved; if they succeed, then they knock at the door of a hut and say, "We are strangers travelling; give us fire and food." Directly a person inside the house opens the door, both men discharge their guns into the house, and immediately run for the bush toward their comrades. The whole town is soon in pursuit, and unless careful they run into an ambuscade prepared for them. A fight may occur, but more often the attacking party return to their town in triumph, shouting: "We are real men, we are real men, we have been to town, we have shot a man (or woman), we are men—real men." There is great rejoicing in their town, and a dance follows. If the palaver is a serious one, the town is often stockaded with split logs placed vertically in the ground; huts are likewise stockaded. Poisoned bamboo spikes are buried in the forest paths to wound the feet of an enemy. The weapons used and relied on to-day are flint-lock muskets. Spears are rapidly falling into disuse. The crossbow is only used for shooting birds and small bush cats. It is a mistaken idea that the arrows used with the cross-bow are poisoned. Shields are not used. The chief causes of war are disputes over women, hence called "women palavers," and these feuds may last for years. Prisoners are often permitted to starve to death, and are occasionally killed and eaten. Owing to a bitter feud it is often impossible for the women to work in the gardens or fish on the river, the consequence being a great scarcity of food. In Foulabifong, where I resided, a woman palaver lasted over ten months, and the three adjoining towns were in a state of famine. A prisoner was nearly starved to death, and I had to repeatedly plead for him. During these feuds many women are shot while walking the paths. The Fang think it quite correct to shoot a woman; they say, "It is always *safe* to shoot a woman because she cannot shoot back." Prisoners are frequently exchanged, others are held as hostages.

Abal (war). Translation.

If people are going to war they go in crowds. If they approach near the town (of the enemy) they hold a council. An old man (one) he says thus: We will go to fire when? Then the others say, We will go in the night. Then they stay (sit) there until night. Darkness comes, and they light a torch. Then two or three people go to the town, and the other people remain in the bush. If the people who went to the town find people sleeping, then they point their guns inside a house and fire. Then people die. Then they go back running to meet the other people. Then they all gather in one place and return singing to their own town. Then they beat the drum and rejoice. Then the people who remained in the town say: Tell us the news as you went. Then they tell the news. Then the headman sits down and tells all the people in town that a person must not go anywhere alone. Then all the people hear, and all sit down (remain around their town to await events).

Ngang (Doctor). Translation.

The Ngang (witch doctor) prophesies war. If the war comes and is in the bush, then the doctor takes medicine wrapped in bush cat skin called *mebup*, and medicine in horns. He holds the horns in his hands. He counts the horns; he hangs the *mebup*. He says to the *mebup*, I say thus: No person must go to the forest. If a person goes anywhere the enemy will kill him. If a person says, I will not listen to the doctors' talk, I will go and do my work; then if he goes, the enemy kill him. If they kill a person, they take the heart and put it in the *abup*. They take an old witch and put it in the *abup*. Then if the doctor prophesies, the witch speaks from inside the medicine. The heart of the person, it talks.

XVI.—Hunting Traps.

The Fang are skilful hunters, but they justly give the credit of the chase to the *Nqui* (dwarfs). I have been told that a dwarf will go hunting in the bush and return with meat after a hunting party has returned unsuccessful from the same locality; the dwarfs have great patience. If while hunting in the forest a man sees a deer, he shouts for assistance: others come and help hunt. If the deer is killed, all claim a share, after one-third has been given to the man who first sighted the game. This is the custom when a man walking unarmed in the forest sights meat, and calls for aid. Meat killed by a regular hunting party is carried to their town and divided. Dogs are used to hunt game, the dogs wear wooden bells around the neck, sometimes the bells are made of iron. Flint-lock guns are used when hunting. Before a hunting party starts out it is the custom to make *biang nzali* (gun medicine), and to place the guns in it; this makes them shoot straight. The natives imitate very cleverly the calls of certain animals and birds for the purpose of decoy. Occasionally they drive game into an enclosure called *olam*. Spears are seldom used in the chase. The crossbow is used for shooting birds and small bush cats.

Poisoned arrows are not used with the crossbow. Pitfalls for game are dug and covered with small branches and leaves; pigs and small deer frequently fall into them. A Fang never attempts to hit a bird on the wing. In firing the flint-locks the gun is not carried to the shoulder, but held by the stock in front of the body, the butt being on a level with the waist. Game laws are unknown.

After a successful hunting expedition the whole town indulges in a feast, men, women, and children eat until gorged; after a period of rest dancing commences and is kept up throughout the night.

Olam (Trap). Translation.

They take small trees and bamboo leaves and bush rope, and make a long fence. They leave holes for the traps and holes for the pitfalls (*i.e.*, opposite the

places where they are going to build these respectively), large bush rat, porcupine, squirrels, die in the traps; deer, gazelle, antelope, large deer and pigs die in the pitfalls. The animals which die in the *olam* are these. This is the *olam*.

XVII.—*Burials.*

Death is never considered as due to natural causes. Disease followed by death is due to *evus* (witch). It is not considered unlucky to attend a dying person. The body is usually left in the house until burial. Embalming is not practised. Mourners smear white clay on their bodies and wear necklaces of pineapple fibre for one moon (month). A coffin is not used and the body is buried in the sitting posture. After burial the grave is levelled off as is the case almost throughout West Africa; the only difference between the burial of a headman and a common man is in the amount of visitors and mourning, and the quarrelling over his goods. Wives of a dead headman remain in mourning from one to three moons (months). The witch doctor, *ngangan*, usually performs a post mortem to find the witch. I attended a post mortem on an old woman. The witch doctor ripped open the abdomen with an old rusty knife, grasped and cut away the uterus and holding it up to the crowd declared "Six witches!" The crowd passed the word "six witches," and spoke the praises of the witch doctor. Relations usually continue to mourn or wail for one moon while inside the house or at work in the gardens. The most common wail is *Ô nan Ô! Ô tat Ô!* (Oh mother! Oh father!).

XVIII.—*Akôm.*

This is a dance. It is not *biang* (medicine) nor is it *eki*. It is, however, practised by men only. The women must not see it. The latter stay within doors, and only hear the words which the men speak outside. The men speak with artificial voices, so that the women cannot recognise who it is that is speaking. (*Fam a kobo ne kiû zie nkôt.*) To make the artificial sounds they use a membrane (*ten*) which encloses the young of the spider (*ndenbôa*). This they spread over a hole (about $\frac{3}{4}$ inch diameter) near the small end of an elephant tusk (*mbang nzok*) from 1 to $2\frac{1}{2}$ feet in length, attaching it with beeswax (*abê*) or a liquid which is obtained from a plantain stalk fresh cut. This juice is called *akirl*. It possesses an adhesive property. The man blows on the large end of the ivory. A curious sound then issues through the membrane so that the man's voice cannot be recognised. This instrument is called *mbang akôm*. The act of playing on the instrument is called *e kobe akôm* (*e kobe*, talk). The performer sings songs; the words are distinctly heard. He sings and all others sing responsively (*a ye bo'besegese b'aka*).

Many songs are used in *akôm*. Here are three specimens of them:—

- (1) *Benza b'abste kobo? Beso benga wog mvé.* Who speaks any more? (i.e., Be silent, let no one speak.) Others are listening with pleasure (i.e., to the performance).

Response by the audience: *Nangekobe*. This word seems to have no meaning but to be simply used as a responsive utterance.

- (2) *Akóm ke yeye zazam*. Let not the *akóm* sing my song. This supposes that another similar performance (*akóm*) is going on in the neighbourhood, and the performers in it are urged not to make use of the song used by those in the first (*akóm*).

Response: *Ziazia, akóm ke yeye zazam*. The word *ziazia*, like *nangekobe*, appears to have no meaning, and to be simply used as a responsive utterance.

- (3) *Ke bele me nzok zam ne mabata*. Do not catch hold of my instrument (tusk of elephant) with *mabata*, i.e., because you have the sickness *mabata* (a kind of sloughing phagedina).

Response: *Ziazia; ke bele me nzok zam ne mabata*.

XIX.—*Abnormalities (Natural Deformities), Albinism, Erythrism.*

During my residence among the Fang I saw five albinos (shown on lantern slide). The natives say of these albinos: "They are white, but *not real* white people." They are treated fairly well; their ever restless eyes cause them much ridicule and annoyance. I know of only one being married. They are not long lived. After death the skull of an albino is greatly valued for medicine, especially for placing with the *biang-akamayeng* (protector of the tribe).

Erythrism is occasionally met with. A red-haired Fang lived in the town of Jam-anen (large affair); his skin was chocolate colour, but his eyes had a pale pinkish colour. The first sight of a red-headed black man surprised me very much.

Hare lip is very rarely seen.

One case of hermaphroditism came under my notice, a Fang male; he was looked on as an *ngangan* (witch doctor) of great power, and was much reverenced.

Deformations (Artificial Deformities).

- A. *Facial*.—The triangular nasal cartilage is frequently pierced. This practice is mostly indulged in by women. Bars of bamboo are inserted or porcupine quills. It is considered *mbung* (handsome).

The lips are not pierced or deformed in any way.

The ears are pierced and ear-rings worn.

Fetish is also suspended from the ears.

- B. *Dental*.—Males file the upper and lower incisors to a sharp point. The only reason given is, "it is *mbung*" (handsome).

XX.—*Fang Proverbs and Sayings.*

Ma kóm wam nlem, I think in my heart.

Me ka, I am gone, said in taking leave.

A skukut nlem, he has a foolish heart.

A nyegl nyole zie, he likes his own body (is conceited).

Azô dili tyineba mrus, this matter (palaver or quarrel) is pushed back (*i.e.*, is to be forgotten).

Wyen njil, w'yen ndê, môt ekôge yen owaban, you see your grandson and your great-grandson, but you cannot see the next generation.

Kunge eso a le we enseki, go; your father calls you down the street (a hint to leave).

Asong avoti da bôl anu, one rotten tooth spoils all (a person once caught lying cannot be trusted).

Me si mone kal meyong mese, I am not sister's son to all tribes (*i.e.*, I am not everybody's servant).

Ejô avoge aye ejima, another day is beautiful (like our saying "Every dog has his day").

Mon kon a'yen avoti, mon môt meyen m'bei, you can see a ghost once but a person twice.

Mon mie meduk m'bei, mon nqui aduk avorti, you can cheat a Fang twice, a dwarf once (here the word *mie* is used for *Fang*).

Jô side avoti, there is more than one day (my turn will come).

M'sidie monge, I am not a child.

DISCUSSION.

Mr. CROOKE, after acknowledging the value of Dr. Bennett's researches among a most interesting people, called attention to the attribution of the art of metallurgy to the dwarf race, which corresponded with European folk-belief. He dwelt on the respect paid to the Palaver House; he gathered that a fire was kept there perpetually burning, though the cult of the sacred fire seemed to have been forgotten. It would thus correspond to the early Aryan institution of the house where the sacred fire was tended, which survived in the Greek Prytaneum. The author of the paper seemed to have failed to appreciate the motive of the rites of passing widows through fire and flagellating them. Judging from the analogy of similar rites in India and elsewhere, the object was to free the woman from the ghost of her late husband, which was supposed to cling to and possess her.

Mr. FITZGERALD MARRIOTT asked whether the witch-doctor who wore the white mask was a Ngi, since in certain parts of West Africa the witch-doctor was independent of the tribal society, while in others he was a member. He also asked whether the dance, in which Dr. Bennett says is played the "Emban-kong" (?) musical instrument made from an elephant's tusk, is in reality a species of secret society; for women and children are not allowed to see it, and it takes place by torch-light after dark. Thus it might answer to the Zan-gbe-to of the Slave Coast, which is a species of police society for seeing that every one is in his house after 9 o'clock at night, or like the Ayaka society of a district near the Kwa Ibo river, which sees that all the fires are out by a certain time. These societies also dance, sing and shout; therefore, as there is usually something beneath West African dances, it is probable that the players and dancers are a secret society or that there is some explanation for the existence of the dance. He also remarked

that the rules of the Ngi society, which Dr. Bennett had read them, were a great step to obtaining the secret ritual of the society. Dr. Bennett had mentioned various ibets or taboos peculiar to this society ; Mr. MARRIOTT said that these were to be found in most secret societies. For instance, in the Kofôn(g) of the little-known Limba tribe of Sierra Leone, one of the taboos was that of sitting on an axe, or other sharp instrument ; another prohibition was that of allowing any one to hold a glowing firebrand to their face. These actions were tabooed because they were included in the ceremony of initiation. He knew other instances, and therefore he concluded that the taboos mentioned by Dr. Bennett were probably actions that formed part of the ritual of initiation or progression in the secret grades.

ORDINARY MEETING.

MAY 30TH, 1899.

C. H. READ, Esq., F.S.A., *President, in the Chair.*

The Minutes of the last Meeting were read and passed.

List of books lately presented to the Institute was read, and the thanks of the Meeting was expressed. Mr. Ling Roth's *Aborigines of Tasmania* was mentioned more especially.

Elections of RICHARD J. A. BERRY, Esq., and F. SWYNNERTON, Esq., as Fellows of the Institute, were announced.

The PRESIDENT then introduced Colonel R. C. TEMPLE, who proceeded to read his paper, "On the Beginnings of Currency," which was well illustrated by lantern slides. He also exhibited a valuable collection of Agri beads.

Discussion was carried on by the PRESIDENT, Professor RIDGWAY, and Mr. GOWLAND, the latter exhibiting a collection of Japanese currency in support of Colonel Temple's views.

After a short reply from Colonel TEMPLE, the evening closed with a vote of thanks to the lecturer.

BEGINNINGS OF CURRENCY.

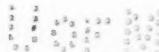
BY COLONEL R. C. TEMPLE.

[WITH PLATES XVIII TO XXI.]

IN a lecture lately delivered before the East India Association on the "Development of Currency in the Far East," I purposely passed over the discussion of the commencement of the subject, and considered only, in view of the time at my disposal then, that part of which relates to the development of the forms of currency in the Far East, existing at the present day and bearing an established relation to coined money or to bullion, in the sense of a metal used for money. On this occasion, however, I had purposed to take in hand the part that I then omitted, but the vastness of the general subject has again obliged me to confine myself within very narrow limits. I can really only now discuss the three points of barter, currency and money in their earliest and simplest forms, confining my evidence in this discourse chiefly to that from the Far East, and on the screen to some leading objects on the subject to be found in the British and Oxford Museums.

The special points I am obliged to leave to some future opportunity are the rise of bullion weights out of measures of capacity, the development of exchange in its modern commercial sense, the rise of coin out of bullion currency and of legal tender out of coin, and the extreme value to mankind of legal tender, to my mind one of the finest achievements of human reasoning powers.

With this much preface, let me commence with what we ought always to settle upon, when about to discuss a subject like that now before us, clear definitions of the main technicalities we shall have to use. If we are to arrive at any definite ideas to-night we must be sure of the meanings of such terms as barter, currency and money. Barter is exchange of possessions pure and simple. I exchange to-day my grain for your fruit and to-morrow my adze for your knife; that is barter. But when our daily transactions become so far complicated as to require some other article in common domestic use to be interposed between the grain and the fruit and between the adze and the knife, *i.e.*, a medium between the articles bartered, we have set up a currency and a medium of exchange. Thus: you and I and the rest of our tribe have all got cocoanuts in varying quantities and can find a use for them every day. I want fruit and you want grain, but instead of exchanging my grain for your fruit I give you six pairs of cocoanuts for the fruit I want, and later on you come to me and give me five pairs of cocoanuts for the corn you want. In the same way I give you my adze for cocoanuts and you give me your knife for cocoanuts. Here we are bartering through a medium and cocoanuts are our currency. When we become a little more civilised and proceed to make purely conventional articles, usable only as a medium of exchange,



we have set up a system of money. For currency consists of articles, real or imaginary, used for account, *i.e.*, for measuring the relative values of different articles of use. So many cocoanuts make one adze; so many cocoanuts make one knife. Whereas money consists of tokens convertible into property. So many imitation iron spear-heads can buy an adze; so many can buy an axe. Exchange has, it is true, come to have in modern civilisation a secondary sense, but this belongs to quite a different part of the subject.

Now, I hope I have made my meaning clear to you. For our present purpose, barter is the exchange of one article for another; currency implies exchange through a medium; money that the medium is a token. And I wish you to observe particularly that neither currency nor money involve necessarily the use of metals, much less of gold and silver. In fact gold and silver have come to be used for money, and currency has come to be expressed in terms of gold and silver money, merely because civilised man has long found out that these metals are the most convenient materials to be found on the earth as media of exchange, and that the most convenient way of measuring relative values is to express them in terms of the media of exchange. I emphasise this point, because we shall have to deal to-day almost entirely with money and currency that are non-bullion, *i.e.*, not of gold and silver.

Barter, pure and simple, does not require much explanation, and I shall confine myself now to one plain illustration thereof from an old book, perhaps not very well known, Davies's *Translation of Olearius, Voyages and Travels of the Ambassadors to Moscow, Tartary and Persia about 1635*. The writer apologises for the digression from which I am about to quote, and well he might, for he proceeds to talk about Greenland. However, we may be glad of this, as he tells us not only what is quaint, but exactly to the present purpose. He says:—

“There is no money in the Countrey, being so happy as not to know the value of Gold and Silver. Iron and Steel they most esteem, and prefer a Sword or a Hatchet before a Golden Cup, a Nail before a Crown piece, and a pair of Cisers, or a Knife, before a Jacobus. Their trucking is thus: they put all they have to sell together, and having picked out among the Commodities that are brought to them, what they like best, they put them also together and suffer those they deal with to add or diminish till such time as they are content with the bargain.”

The points for our consideration in the above narration are two. Firstly, the writer talks of “the Countrey being so happy as not to know the value of Gold and Silver.” I cannot deal with this point to-day, but I am in a position to produce evidence, which I think would convince you of the fallacy of this popular error. Had Ovid been possessed of a deeper insight into the springs of action he would have written:—“Effodiuntur opes irritamenta bonorum,” and not have misled for ages a world of unthinking followers by some truly unhappy lines. Secondly, you will perceive that the trucking was perfectly to the content of each party to the bargain, *i.e.*, both to the civilised European and the savage. Each side, mark you, viewing the bargain according to his own interest. I want to draw your particular

attention to this fact; because so many imperfectly informed travellers, non-trading residents, missionaries and others have so very often unjustly vilified European traders in their truck with savages. No doubt the civilised trader has come away with for him a magnificent bargain, out of which elsewhere—but elsewhere please remember it must be—he is going to make a fine thing. On the other hand the savage, too, has come away more than satisfied, because with what he has got from the trader he can procure from among his own tribe something he very much covets, which the articles he parted with could not have procured for him. Both sides have profited by the bargain from their respective points of view, and the trader has not taken an undue advantage of the savage, as he is so often said to do.

I will explain this by an instance or so. In the Mergui Archipelago off the coast of Burma, there lives in a very poor way a group of wild Malay families, known as the Selungs, which is systematically exploited in mercantile directions by certain Chinamen, whose proceedings have been characterised by one eminent writer thus:—

"These poor creatures [*i.e.*, the Selungs] gather 'black coral,' eaglewood and so on, which they exchange for a little cloth, paddy, tobacco, and perhaps 'the smell of opium' now and then, valued at not a fifth of what they give in exchange."

By a much earlier observer we are told that "they scarcely know the value of money, and are therefore the losers in the bartering trade with the Chinese and others who visit them. Perhaps, they think themselves the greater gainers, since they give products of no use to them for others of vital importance, and are thereby enabled to maintain a wild independence."

Now, I ask you to contrast these two statements. We are told first that what the Selungs give in exchange to the Chinamen is valued at not a fifth of what they get; valued, that is, elsewhere in the civilised world. But the savages' point of view is correctly put forward in the earlier statement. What they get by barter is of value to themselves; what they give is of none. As between civilised man and the savage the bargaining is so far fair and reasonable. It becomes unfair, when, as we know from other sources, the traders take advantage of this people's delight in strong liquors and make them drunk, and then conclude unconscionable bargains, by which the savages part with their produce for an insufficient quantity of articles of use to them.

A distinct apprehension of this point seems to me to be essential and to be so often wanting that I feel impelled to give another clear instance. My late friend and genial brother officer, Gen. Woodthorpe, in his account of the Lushai Expedition of 1871–2, wrote thus:—

"A large number of Lushais had accompanied us as far as Tipai Mukh and were busily employed in driving a few last bargains. They brought down large quantities of india-rubber, which they eagerly exchanged for salt, equal weights, and as the value of the rubber was more than four times that of the salt, any individuals who could command a large supply of the latter had an excellent opportunity for a little profitable business."

Now, please observe that the profit was not altogether that of the civilised man on this occasion, if the matter be looked at from the savages' point of view. For Mr. Burland, an experienced civil officer with the Expedition, made in the blue-book of the day an observation on this very transaction, which has been independently confirmed by Mr. Soppitt, another friend now departed. Mr. Burland wrote:—

"In former times these tribes made all the salt they required for their own consumption from salt springs, and they say that to make enough salt for the requirements of an ordinary family, a man's labour was required for three months. A man can now collect sufficient india-rubber in one month to exchange with Bengalee traders for more than enough salt to last him and his family for a year. So that a man who chooses to occupy himself three months in collecting india-rubber will, by bartering the same for salt, have a large surplus of that article, with which to trade with the southern tribes, who, they say, are willing to give one maund of rubber for a quarter maund of salt." The point could not be put more clearly.

For evidence in the same direction I must allude to several cases, recorded when military and other expeditions along the frontiers of Assam and Burma have found that British coins could only be treated as articles of barter. During the Lushai Expedition of 1871-2 a rupee having been given for a fowl on one occasion the savages would only thereafter exchange fowls for rupees, though the rupees could be got back again for the base metal coin of a neighbouring semi-civilised State. In 1893 amongst some of the Shan Tribes along the Chinese border rupees could not buy a pony, though small silver coins of the same number, and of course of much less value to us, could. Amongst other Shans, copper coins alone could purchase anything, any kind of silver failing to be attractive, and there being no difference in the value placed upon a rupee and its eighth part.

The reason in each of the above cases is the same and clear. The savages in question had a use respectively for the base metal, the small silver and the copper, but none for the rupee, which to us was of very greatly the highest value. The adherence of the Lushais to a rupee as the exchange equivalent of a fowl was due to an accident. Having got into their heads by a chance that to us a rupee was the proper exchange for a fowl, they stuck to it from an unreasoning suspicion that, unless they did so, we were in some unascertainable way cheating them; and their subsequent exchange of the rupees so acquired for what was to us base metal rubbish was from their point of view to their advantage.

Of course every one knows that trade will accommodate itself to any circumstances and evolve a *modus vivendi* between any two apparently irreconcilable parties. I could give from notes, if I had the time, many quaint and instructive instances of the working of barter as a mode of trade between savages and civilised man, but I will content myself with one only from my own experience. I once had to acquire for Government about $8\frac{1}{2}$ acres of cocoanut-covered land in the Island of Car Nicobar in the Bay of Bengal, I first carefully and literally walked

the boundaries, fixing them approximately with a prismatic compass to the great awe of the sellers, and then gave them without hesitation what they considered as much as they could dare to ask, namely, 12 suits of black cloth, 1 piece of red cloth, 6 bags of rice, 20 packets of China tobacco, 12 bottles of Commissariat rum.

But a far more instructive instance of evolution is to be observed in our dealings with the less civilised peoples inhabiting Burma and neighbourhood. The Government has to preserve order by means of fines and some sort of pecuniary penalties or enforced compensations, and it has to collect revenue in some shape or other, and for these purposes it must have perforce some means of apportioning values. But the people only understand barter and the notion of relative values is entirely rudimentary. In these circumstances, in Assam, among the Kacharis, the British Courts have drawn up for their own use a regular scale of fines and revenue in terms of the domesticated animals kept by the people,—e.g., a man's revenue would be assessed, not at Rs. 10 but at a big buffalo; a fine would not be fixed at a quarter of a rupee but at a cock and two small hens. So amongst the Chins in Burma a customary present would not be Rs. 10 but a full-grown hog, and a fine or a compensation for injury would not be Rs. 5 but a silk jacket. Even the old native government of Burma had to adopt a system akin to this, for at the time of the First Burmah War of 1824 it levied fines, as a variant of the very ancient Eastern notion of slavery for debt and partly also as a kind of blood-money, on the value of the human body, on the following scale in terms of British money:—

	Rs
A new-born male child...	... ... ... 10
A new-born female child	... ... ... $7\frac{1}{2}$
A boy ... ... ...	... ... ... 25
A girl ... ... ...	... ... ... $17\frac{1}{2}$
A young man ... ... ...	... ... ... 75
A young woman ... ... ...	... ... ... $83\frac{1}{2}$

I ask you to bear this point in mind, as it is actually the very commencement of that product of human reason we have been calling "currency"; the necessities of civilised governments obliging them to set up, and educate populations up to, the idea of a currency, where none before existed. For when once the savages we have been considering have become accustomed to domestic animals and articles being given fixed relative values, a currency in the most elemental form thereof has been started. I also ask you to remember this point, because this particular development, being natural and necessary, is inevitable and not confined to wild peoples, and for this reason I shall have to revert to it again later on.

It will be fresh in your minds that I have instanced the use of cocoanuts just now in generally explaining currency as distinguished from barter and money: currency being the use of an article commonly required as the medium for exchanging actual property between buyer and seller. I did so because of cir-

cumstances within my own experience. In the Nicobar Islands, which are still in my official charge, from all time—and we have definite knowledge of the Nicobars from the days of I-Tsing in the seventh century to those of Marco Polo in the thirteenth, and through all those of the earlier European travellers to the present day—cocoanuts have been and still are the currency of the people. They and the trees that produce them are the staple products of the country and the most valuable possession of the inhabitants. They play a great part in finding them in food, drink and materials for housing, clothing, and furniture. They are thus in constant and daily use and they are employed for currency, *i.e.*, for measuring the values of other articles and as the medium in exchanging them. I will give you a strong instance of this from what I have myself seen.

On the 5th April, 1896, the people of Mûs in Car Nicobar had occasion to buy a large racing canoe from the people of Chowra Island, and this is what they did. They proceeded to value the canoe at 35,000 cocoanuts, but they are a lazy people and had no intention of fetching such a large quantity down from the trees in their possession. So they paid for the canoe in a great number of articles, each valued in cocoanuts, nearly all of which were in their possession as the result of trading in cocoanuts with such foreigners as Burmans, Chinese, Malays, and natives of India. The list of these articles is interesting and goes to prove my point, but I have no time to read it now. It included domestic animals, utensils and implements, cloth, beads, silver articles and even British money.

This transaction induced me to set the local government agent to try and ascertain the approximate value in cocoanuts of such trade articles as the Nicobarese require for domestic and other uses, and his inquiries produced a long list, from needles at 12 coc. a dozen and matches at 24 coc. per dozen boxes to red Turkey cloth at 1,600 coc. the piece. Now, in this list a two-anna bit, which is the eighth of a rupee, was valued at 16 coc. and the rupee itself at 100; but you will perceive that eight times sixteen is 128. Now, the reason for the discrepancy is that the little piece of silver is used for one sort of ornament and the big piece for another sort, and their value in cocoanuts to these people depends on their relative value as ornaments, and not on their relative weight combined with fineness, or, as we should say, their intrinsic value. I need hardly say that the Nicobarese do not recognise coins as a medium of exchange.

How these primitive tribes manage to count and tally cocoanuts in large quantities is an extremely interesting anthropological study, which of course I cannot follow up now, but I hope I have succeeded in making plain to you the first beginnings of currency and the mental attitude of man in a primitive stage of civilisation towards this question.

There is in existence a mass of evidence from all parts of the world showing how savages, semi-savages and some civilised peoples employ natural articles of use as currency, though, as already stated, I confine myself now chiefly to the far East for the instances I have to adduce.

Thus, rice has been used up till quite recent times as currency in daily

transactions in many outlying places about Burma and the neighbourhood; and in some parts of China this is the case no doubt still, and it was so in Kashmir in the sixteenth century. Cloves were currency in the Moluccas at the same time, and fish in some other parts of the Malay Archipelago, at any rate in 1820. Salt is another article that has been used, as noticed by even the earliest travellers, in China, Burma and the hills all round and in many parts of India. Up to the time of the first Burmese War in 1824, at any rate, cotton was the currency between Arakan and Burma. Of livestock I need hardly say much, as the use of these for measuring values is a very widely spread instance to the point. But chickens were currency in the Maldives off the south-west coast of India in the fourteenth century, and pigs in Tibet and oxen in Central Asia in much later days. The Lushais of the Assam-Burma borders reckon values in buffaloes, and from the Khonds of Eastern India—the people of the Meriah human sacrifices—we have a fine bit of evidence in the middle of the present century; for Macpherson, a name that will never be forgotten among Anglo-Indians for his efforts in putting a stop to the Meriah abominations, tells us in 1845, that “the value of all property is estimated by the Maliah Khonds in ‘lives,’ a measure which requires some adjustment every time it is applied; a buffalo, a bullock, a goat, a pig or a fowl, a bag of grain, or a set of brass pots, being each, with anything that may be agreed upon, a ‘life.’ A hundred lives on an average may be taken to consist of 10 bullocks, 10 buffaloes, 10 sacks of corn, 10 sets of brass pots, 20 sheep, 10 pigs, and 30 fowls.”

But my tit-bit of evidence from the East is from Turkestan in the present day, where mulberries are the currency, just as till quite lately bitter almonds were currency for small values in many parts of civilised India. I have kept it to the last, because the story thereof carries me on to my next point; and you will perceive at the same time the parallel it affords to what I have said of the Nicobars. Quoting from a recent Russian *Report* we are told of Darwaz, which is in Bokhara, that “the inhabitants of Darwaz plant mulberry trees, and the mulberry is their sole means of subsistence. In summer they eat it raw and in the winter in a dried state, in the form of flour, out of which they make a kind of flat cake. Their dress they obtain by bartering the mulberry for rough matting and sheepskins, and even their taxes are paid with the mulberry. In fact the mulberry is the measure *tubeteika*, the currency of Darwaz, and many Darwazis never know the taste of bread all their lives long . . . The grain measure is the *batmân* = 45 *tubeteikas*.”

But observe, when the dried mulberries are made up into *tubeteikas* or measures, the currency begins to cross over the Rubicon, on its way to becoming a token and hence money. It is in this act of passing over from currency to money that our subject presents its chief difficulty.

Before parting with the consideration of this particular aspect of the subject, I would like to remind you that non-bullion currency has not by any means been confined to savage, uncivilised or semi-civilised communities. In the early history

of our Colonies we find that the civilised communities set up by the English in remote localities often began, and sometimes long continued, their trade dealings in a currency of local staple produce, and that too by express law; just as Prof. Ridgeway has explained in his *Origin of Currency* was the case in Iceland about 1420 in the matter of stockfish or dried cod, and as we have already seen is also the case with the British Courts established in the wilds of Assam and Burma. The great well of evidence on this head is Chalmers' *History of Currency in the British Colonies*, and it is a flowing one, though I have not time to extract more than is just sufficient to illustrate my present contention.

The non-bullion currency of the early colonists all through the seventeenth century covered a great variety of articles: tobacco, corn, wampum, sugar, rum, cotton-wool, mahogany, molasses, ginger, indigo, skins and so on. In 1643 in Massachusetts wampum strings were made a legal tender, and tobacco was rated under penalties at 3s. per lb. in Virginia in 1618. So sugar, tobacco and other things were made into monetary standards in the West Indies in the seventeenth and eighteenth centuries. Dried codfish was a circulating medium in Newfoundland till much later. Even as late as 1708, tobacco, to quote an old *Report*, was "the Meat, Drink, Cloathing, and Money" of Maryland; and of tobacco as a currency there is a good story told about Virginia in 1620–21. In that year 150 "young and uncorrupt girls" were imported as wives for the colonists and were rated originally at 100 lbs. of tobacco or £15, but subsequently at the increased price of 150 lbs. of tobacco or £22 10s. And we are told "that it would have done a man's heart good to see the gallant young Virginians hastening to the waterside when a vessel arrived from London, each carrying a bundle of the best tobacco under his arm, and taking back with him a beautiful and virtuous young wife."

In Barbados the colonists commenced with a currency chiefly in cotton and tobacco, but also in indigo and "fustick-wood." About 1640 sugar became the currency and was legal tender from 1667 onwards, coined money being established in 1715. In the Leeward Islands, books and accounts were kept in terms of sugar, and even as late as 1740 it was officially stated that "the value which is put on sugar, rum, cotton, and other commodities, the growth of the Leeward Islands, is called currency there." The variety of "the other commodities" was considerable from time to time; tobacco, cotton-wool, indigo, ginger, molasses, and so on; and their rating was fixed by the government, just as we saw the Indian and Burman officials rating livestock and so on for the wild Lushais and Chins. This went on more or less till 1784. In British Honduras, one of the most unwieldy currencies yet invented, mahogany in the form of logwood, lasted till 1785. In the Bermudas, which was the first of the colonies to start a coined currency, tobacco was the currency until 1658.

Now, it is from the collation of such facts as those above given that we perceive first, that in similar conditions the mind of civilised and uncivilised man works in much the same directions and produces much the same results;

and that, though, if I had the time, I have evidence to produce that mankind is really much better off with gold and silver coin of the realm as his currency, it is not at all necessary in a condition of comparative isolation, such as that of savages or a semi-civilised people must always be in practice, for currency to consist of metal.

I now propose to tackle our difficulty—to plunge into the Rubicon and see if we cannot find a clear way across. The cause of all our trouble—of the eddies, whirlpools, currents and other dangers in our path, is the fact that every section of mankind in every place and at every period, being a product of nature, has never developed along a single line. He has always been subjected to and affected by outside influences. He has picked up a little here, snatched a little there, and engrafted what he has caught up on to the tree of his own ideas, with the result that its subsequent growth has become complicated or even diverted from its original tendency. A strong example of this is the Hindustani language; its basis, genius if you like, is Hindi, the superstructure is chiefly Persian and partly Arabic, with grafts all over it of scraps of very many other tongues. Our own tongue is in much the same case. Anglo-Saxon, a term implying a growth, mark you, at base with a ten per cent. infusion of Latin and Greek, another appreciable infusion of Norman and modern French, and sprinklings of every other language under the sun. It is just the same with currency, in that common wide sense of the term which covers both barter and money.

No semi-civilised group of men has been at any time entirely isolated, and in tracing the development of currency anywhere, the influences of contact with the outside world are everywhere and always more or less plainly apparent. Barter is the natural basis of all dealings between man and man, and the setting up of a common useful article as a medium of exchange—of a currency in the restricted sense of this discourse—is a natural development. But somehow a community under our observation has learnt to count after a fashion. Somebody has taught it how to measure, or in some forgotten way it has been led on to a distinct point further in upward development and has acquired the art of measuring by weighment. Whenever this has happened, and one or more or all of these things have happened nearly always to any community we can now study, complications have ensued. The result being, of course, that in any given concrete instance of barter, it is not by any means to be clearly separated from currency, and *vice versa*. Some of you must have already perceived this in the course of my remarks this evening. It must have occurred to you that some of my illustrations of barter are perilously near currency, and that the aptness of some of my cases of currency is jeopardised by their close approach to barter. Just so. In my view, in illustrating by examples a natural development, this is inevitable. It is a phenomenon of nature, of which the explanation I offer is that just given.

However, the passage from barter to currency does not present any great difficulties practically, but between currency and money, between the employment of a domestically usable article and the employment of a domestically non-useable

token as the medium of exchange, there are many difficult currents, eddies and whirlpools, and the proper channel is by no means always clearly to be seen. Let me hope that I shall now in your judgment take you over as safely as I have in my own judgment taken myself.

Let us commence our passages by following the safe current of roughly measured articles in every-day use as the medium of exchange. In the fourteenth century Friar Odoric tells us of a rich man's revenue in China being stated in sacks, *i.e.*, "heavy ass-loads" of rice, revenues there being, until quite lately, and perhaps still, estimated in sacks of rice. In Burma, under the native Government, they were always estimated in baskets of rice, just as they were in Kashmir in the sixteenth century in the days of Akbar the Great. All this is on the same principle as the use of the rolls of tobacco, with which, as you have just heard, the young Virginian paid for his bride's passage out from England, though the measuring is not, owing to the comparative civilisation of the parties concerned, so accurate or regular. I think also that the currency in skins so well known in Ancient Russia, North America and China may be safely placed in the category of roughly measured currency, though the measurement is effected in a manner, and is based on principles, differing from those on which the measurement of the rice and tobacco was effected and based.

Out of the current of roughly measured currency we may glide almost imperceptibly into the equally safe current of carefully measured, and, so far as regards measurement, regulated currency. Of this the tobacco rolls of Old Virginia are equally as much an example as they are of roughly measured currency, giving us an instance of the difficulty in some cases of arriving at a distinct attribution to class. The *tubeteika* is, however, a clear instance; 45 *tubeteikas* or mulberry cakes make by local law or custom a *batmân* or standard measure. And when we come to study our old friend Marco Polo's sayings about "Tebet" in the thirteenth century we find the same thing:—"The small change again is made in this way. They have salt which they boil and set in a mould, flat below and round above, and every piece from the mould weighs about half a pound. Now 80 moulds of this salt are worth one *saggio* (say a sixth of an ounce) of fine gold, which is a weight so called." In other words 80 moulds of salt of a definite size made a *liâng* or Chinese tael of the period. The experience of the Dutch in the Malay Archipelago in 1596 was much the same in the matter of cakes of sago.

In 1710 Alex. Hamilton, the traveller, procured evidence to precisely the same effect from Borneo, which he thus quaintly states:—"Beeswax is the current Cash in that Country. It is melted but not refined, and cast in moulds of an oblong Square, the Breadth about Two-thirds of the Length, and the Thickness Half the Breadth, and a Ratten Witby to lift them by, cast in the Wax. A Piece weighs a quarter of a Pecul which comes to in English Weight, 34 Pound, and a Pecul is valued in Payments at 10 Masscies or 40 Shillings Sterling. They have also for smaller Payments Pieces of Eight to a Pecul and Sixteenths and for smaller Money they have Couries." In the above pregnant passage the term "pecul" is of great

interest in another phase of the development of currency, for it means fundamentally a man's load ; the masscie or mace, properly *más*, was a small fixed weight of gold. But the point just now is that moulds of beeswax of certain defined sizes equalled certain defined weights expressible actually in money.

Tea, in bricks and cakes, is another similar form of currency in natural produce, which has been widely noticed by travellers and others, and has what naturalists call a wide distribution, for it is found from Shanland and China to Russia. The use of tea bricks and their apparent close approach to money is well put by Baber, the celebrated traveller, writing in 1882 :—“A brick of tea is not only worth a rupee, but in a certain sense is a rupee.” Some 20 years earlier Clement Williams, a name once well known in Burma, wrote :—“The only kinds apparently known in the market at Bamo are the flat discs of China tea and the balls of Shan tea. The discs weigh 20 tickals each ; seven piled together make a packet, which used to sell at 1½ to 2 tickals [of silver, say 5 shillings].” This is a very neat bit of evidence for our present purpose.

Passing from natural produce in conventional cakes, bricks, balls, discs and what not to articles that are entirely manufactured, there is for the present discussion a valuable reference to a currency in cloth in a letter from John Jesse, dated 20th July, 1775, to the East India Directors. This old Oriental worthy writes :—“I was informed the quantity [of pepper] that year [1774, in Borneo Proper] was 4,000 peculs, cultivated solely by a colony of Chinese settled here, and sold to the junks, at the rate of 17·2 Spanish dollars per pecul, in China cloth called congongs which, for want of any other specie, are become the standard for regulating the prices of all commercial commodities at this Port.” And then he proceeds to relate a little hankey-pankey by which the contractor cheated the workmen of about half the produce of their labour ; a proceeding I would like to remind you that is very much easier with a non-bullion currency or money than with a legal standard gold and silver coinage, which is in reality, so far from being a curse, one of the greatest blessings man's ingenuity ever brought about for the benefit of his kind. But, however that may be, the congon must have been a piece of cloth of an average length and size, and therefore it belonged to the category of carefully measured articles, domestically usable and employed as a medium of exchange, and that is enough for us just now.

An instance of an odd taste in currency, for which there is much evidence in the Far East from Burma, Yunnan, Shanland, Siam, Malay Archipelago and Borneo, among other places, is the use for that purpose of glass jars and bottles. The Chinese noticed this of the Burmans 1,000 years ago, and in 1870 and 1874, during expeditions in Upper Burma, one writer notes that “what money could not secure empty pint hock bottles did. For four of these I got eleven eggs and a brood of jungle fowl chickens.” Another noticed that the Shans placed “an inordinate value upon empty bottles.” Any kind of liquor bottle was good, soda-water bottles were better, red hock bottles best of all. In the very last Consular Report from Yunnan, for 1898, we are told that in the hills these “bottles are

accepted in preference to silver." The bottles being "good quart bottles of clear glass." Here we have, you will perceive, a ready-made careful measurement, which the users of the currency are unable to effect for themselves, though they are thoroughly alive to the value of the constancy in the size respectively of the hock, soda-water and other liquor bottles.

The pleasant and safe currents of roughly and carefully measured articles have carried us pretty far on our way, with just a little roughness over the matter of the Virginian tobacco rolls, but our further journey is through rougher waters, though I do not think we need apprehend any fear of coming to grief. De Morga, the famous and exceedingly intelligent Governor of the Philippines early in the sixteenth century, after explaining that the usual way of trade was in general barter, says:—"Sometimes a price intervened, which was paid in gold, according to the agreement made; also in metal bells brought from China, which they value as precious ornaments. They are like large pans and are very sonorous, and they strike upon them at their feasts and carry them in the vessels to the wars instead of drums or other instruments." We are here still in the region of a currency of the same sort precisely as the glass bottles of the Shans, but when we come to look into the story of the big drums of the Karens of Burma, of which two fine specimens are in the British Museum, the conditions are much less clear. Of these Gen. Macmahon, a slovenly and discursive but withal most experienced writer on the Karens, has said:—"Among the most valued possessions of the Hill Karens is the kyee-zee, consisting of a copper or spelter cylinder of about a quarter of an inch in thickness, averaging about 2 feet in length and of somewhat greater diameter at one end, which is closed with the same kind of metal, the smaller end being left open. They are ornamented in a rude style with figures of animals, birds and fish, and according to size and volume of sound are valued at from £5 to £50. On the outer circle are four frogs. They have distinctive names for ten different kinds, which they pretend to distinguish by the sound. In the settlement of their quarrels and in the redemption of the captives, the indemnification always takes the shape of a kyee-zee or more with perhaps a few buffaloes or pigs as make-weights. To such an extent does the passion for the possession of these instruments predominate among the more secluded tribes, that it is said instances are by no means rare of their having bartered their children and relations for them. The possession of kyee-zees is what constitutes a rich Karen. No one is considered rich without them, whatever may be his other possessions. Everyone who has money endeavours to turn it into kyee-zees, and a village that has many of them is the envy of other villages, and is often the cause of wars to obtain their possession." These Karen drums, then, are of varying size, are used in making large payments, and represent wealth. If they are put to domestic use, as for feasts and what not, they must be classed as currency; if they are to be looked on merely as tokens of a certain value, and kept only for making large payments when due or only as representatives of wealth, then they are money. They are in fact just on the line between currency and money.

It is a far cry from the Burmese border to Angola, but I must take you there for a parallel, from the remarks of Pyrard de Laval in 1601, who tells us:—“As for the small money of Angola, it consists only of little shells, somewhat like those of the Maldives [*i.e.*, cowries] and little pieces of cloth made of a certain herb. These pieces are an ell in length, more or less, according to the price. And when they go to market to buy their goods they carry no other money.” Now, if these ells of cloth were for personal wear, they were thus used for currency; if they were as I understand, never worn, they were made for money. You will perceive what a very short distance there can be between currency and money, and how nearly these two articles take us through difficulties to the opposite shore. But I can show you that it is possible to get nearer still without actually landing thereon.

Referring to the salt moulds of Marco Polo, Yule, in his invaluable edition, tells us that Ramusio has stated that on these moulds “the Prince’s mark is printed and no one is allowed to make it except the royal officers.” Later on I will show you on the screen a tea brick from Russia stamped with something like a Government or official mark. Currency cannot get nearer to money than this, for if we define a coin as a lump of metal money stamped to indicate its exchange value, and coin of the realm as such a lump stamped to show that it is a legal medium of exchange, we have reached in the salt moulds something very like a coin of the realm in salt. But remember that as both the salt mould and the tea brick can be put to an ordinary domestic use they are still currency and not money.

Having brought you I hope in safety so far, I am going to take you a little step further in smooth water, so that you may at least touch the opposite shore. The clearest instance I have yet come across of the exact point where currency ends and money begins—of the very last act in crossing the Rubicon—is the use of rice in Burma as a medium of exchange, as it has come under my personal observation, supported by that of the British Resident at the now defunct Court of Ava in 1797. Rice is still used, or was at any rate ten years ago used, in this way in Upper Burma in village transactions, but such rice was neither food-rice nor seed-rice, but useless broken rice. In other words it is a non-bullion token and so money, just as much as the imitation hoes, hatchets, knives and so on of the Chinese and other peoples in various parts of the world are tokens of currency and so money.

Another almost universal instance of a non-metallic money proper is the cowry, for these sea-shells, where chiefly used in the East, are not of any domestic use whatever to the people who pass them from hand to hand, and are expressly imported in very large quantities, often from great distances, only for the purpose of a medium of exchange. They afford a clear example of an untouched natural product being converted into money as distinguished from currency.

All these things, broken rice, imitation iron instruments and cowries, properly fulfil the conditions of material for money. They have to be produced, and though fairly common the production is, in the conditions in which the producers live, nevertheless limited, and therefore they can have a token value. To take the least

likely instance. Rice has to be cultivated ; the amount of cultivation depends on the capacities and numbers of the cultivators ; of what is thus produced a fixed quantity must go for food and another fixed quantity for seed ; only what is spoiled in handling and what is over can be used for money. The production of broken rice is therefore distinctly limited and at the same time sufficiently abundant. This is why to isolated half-civilised villagers living in certain places broken rice is money. The reasoning that makes it money for them is precisely that which makes gold, silver and copper tokens money for us.

We are now fairly landed in the region of money, and I would point out that what has kept our course straight is holding on to the definition we started with, viz., that currency implies that the medium of exchange is a domestically usable article, and money that it is a token not domestically usable. It is just this definition that is the test by which we can separate metal articles, when used as a medium of exchange, into those that are currency and those that are money. When the iron-smelting Shans of Zimmè pay their revenue in the elephant chains, spear-heads, cooking-pots and other ironware which they make, they are using currency ; but when similar Shans along the Mekhong use lozenges of ingot iron for making payments, they are using a real money. By the way it may interest some here to know that the only proper description of this often mentioned money that I know of is to be found in Aymonier's *Voyages dans les Laos*. So also the usable iron hatchets or handbills of the Nassau Islanders, found in use in 1792, were currency, while the thin, *i.e.*, imitation and useless, as I will presently show by examples, iron knives of the Kachins and Shans of the Assam-Burma border of about the same period were money. Thus, too, the gold and silver boxes, bowls and necklaces, and the quainter and prettier gold and silver leaves, flowers and even trees of the former Shan, Malay and Burmese tribute formed a sort of currency and not of money.

Such are the arguments by which I would seek to prove my points out of the books and my verbal evidence, but before closing my remarks I would note just one more point as to which confusion and mistakes may easily arise. In 1241 the Emperor Frederick II, son of Barbarossa, and perhaps the grandest historic figure of all in the Middle Ages, issued a temporary and honest leather currency. In the present century among other places, for local reasons, parchment and paper currencies have temporarily been established respectively in the Cocos-Keeling Islands and in the Andamans. From the ninth to the fifteenth centuries a most remarkable paper currency was very widely established in China. For a long time past there has been, and probably there still is, a noticeable currency in porcelain gambling tokens in Siam. Now, not one of these has any connection with the beginnings of currency, and they arise out of a state of things far beyond the scope of our present subject, for their existence is dependent on conditions only possible in a high state of civilisation, as they are each and all based upon commercial credit, an idea not possible to mankind when placed in the surroundings we have been assuming. While on this point, it may be as well to remind some here that the

early Chinese writers on paper currency understood the true commercial nature thereof as clearly and distinctly as would the Governors of the Bank of England at the present day.

Having thus talked to you out of my own experience and the books I have been studying chiefly about the Far East, I will show you some slides, exhibiting however articles and objects from many parts of the world, by way of clinching the arguments I have adduced. I am here indebted to the kindness and knowledge of four friends, and the resources of two Museums. It is due to Mr. C. H. Read and Mr. Edge-Partington of the British Museum and to Professor Tylor and Mr. Balfour of the Oxford Museum that I am able thus to try and convince you through the eyes as well as through the ears. I am also indebted to Mr. Levin for his kindness and courtesy in explaining and lending for to-night samples of his unrivalled collection of African trade and other beads. And now let me remind you that I have not to-night made any kind of attempt to explain either currency, money or exchange as we modern Europeans understand and use those terms, for they are very far removed from the beginnings we have been talking about. Also in this lecture I make no sort of pretence to exhaust the points I have taken up, and I have done no more than give such examples as seem to me to properly illustrate them, confining myself to definitions and beginnings and taking no count of developments.

Description of the Plates.

Plate XVIII.

Fig. 1 is the feather money of Santa Cruz, South Pacific. It consists of two bands of vegetable fibre covered with parrot feathers. There are two boards which are placed in the middle of the bands above and below. The whole structure is carried in a bag and is indivisible. It is real money, i.e., it is used for no other purpose than as a medium of exchange. It is, however, only used for expensive purchases, as it is difficult and slow of manufacture, and therefore of great intrinsic value in itself. This should be borne in mind, as the Fig. 2 probably records a mistake made on "high authority."

Fig. 2 is a photograph of feather money taken by Bishop Montgomery at Nelua, Santa Cruz Islands, in front of the house of a trader, and said to be the price of a girl bought as the teacher's wife; but it is nevertheless much more likely to be the trader's capital, as there is very far too much of it to be *prima facie* the price of a girl for a bride. There is a great number of the feather bands supported on the bamboo or cane and many more on the heads of the natives standing around; and it is doubtful if a girl would be thought to be worth even so much as one pair of the bands.

Fig. 3 is a necklace of red feathers used as currency in Santa Maria, Banks Group, South Pacific, where shell money is not used. In the Torres Islands, where shells for money are not found, their beautiful little arrows are used as currency (Codrington, *Melanesians*, p. 327) Both of these are real currency because they have a domestic as well as a pecuniary use.

Figs. 4 and 6 are strings made from the hair of the ears of the flying fox in short lengths, from New Caledonia, and Fig. 5 is a spear thrower, or becket, with flying fox hair wound round it in parts, from New Caledonia. Now, whether this flying fox hair is money or currency all depends on whether these strings of it are used domestically as ornaments or not. Our information is not complete on this point, though we can guess that it is money from what we know of the Figs. that immediately follow.

Fig. 10 is a feather ornament from the New Hebrides, worn by men after making the proper number of feasts and then used as money. This is a fine specimen of the borderland between currency and money, and shows how an article which has been domestically usable passes into the class of articles domestically non-usable on becoming money. Edge-Partington, *Ser. II*, p. 86.

Fig. 11 shows flying fox fur in strings from the Loyalty Islands. This was formerly money, as being an article not used for any other purpose.

Fig. 9 shows honey-sucker feathers from Hawaii, stuck in bundles on strips of cocoanut fibre, just as they are collected. This is currency because in this state the feathers are used as a medium of exchange, but are also used for ornaments, clothing and other domestic purposes. They well indicate the origin of the use of natural products as money, being plentiful and yet limited in production. The limitation was due to the fact that feather hunting was a vocation. The feathers, too, had a relative value according to rarity or difficulty in production. Thus five yellow feathers of the "royal bird," which were all that the bird could produce, were accounted equal in value to a piece of nankeen, which was sold for one and a-half dollars; this would probably represent to the natives at least a pound of our money. (Codrington, *Windsor Magazine*, May, 1899.)

Fig. 8 is a purse and string of shells from New Caledonia. The string consists of very fine shell discs divided by knots on a fine cord. The purse is trimmed with flying fox fur as ornament. The whole is money.

Fig. 7 shows a string of fine shell beads, fifty-four to the inch, characteristic of the Banks Group, South Pacific. It is the highest form of their money, because of the labour involved in producing it, and therefore of its intrinsic value. Edge-Partington, *Ser. I*, p. 151.

Fig. 12 exhibits the tuskshell money of British Columbia. In this case the shell ends have been clipped off and the shells, dentalium, have been strung in eight sections divided by bars of goat leather. They have a pendant made of mother-o'-pearl, from the *haliotis*, or Venus's ear. The two specimens in the British Museum are exactly alike. Ridgeway, *Origin of Currency*, p. 10; *Smithsonian Report*, 1887, Part II, p. 315ff.

The authority on this point is Mr. R. E. C. Stearn (*Ethno-Conchology, a Study of Primitive Money*, pp. 296-334, *S.R.*, 1887), whose remarks on this particular money so exactly show how a shell can be used as money, because while abundant it is yet limited in production, that I pause to give them here. "The tusk-shells are collected in the following manner:—An Indian when shell-fishing, arms himself with a long spear, the haft of which is of light deal; to the end is fastened a strip of wood, placed transversely, but driven full of teeth made of bone. The whole affair resembles a long comb affixed to the end of a stick with the teeth very wide apart. A squaw sits in the stern of the canoe and paddles it slowly along, whilst the Indian with the spear stands in the bow. He stabs this comb-like affair into the sand at the bottom of the water, and after giving two or three prods draws it up to look at it. If he has been successful perhaps four or five money-shells have been impaled on the teeth of the spear. It is a very ingenious mode of procuring them, for it would be quite impracticable either to dredge or net them out, and they are never, as far as I know, found between tide-marks."

It will then be perceived that these dentalium strings of fixed form and number are money for precisely the same reason as the bags of broken rice in Burma. I may add that this article of Mr. Stearn's is generally well worth study in the present connection.

Fig. 13 shows a string of purple wampum beads from North America tagged with British green silk and a mixed string of purple and white wampum beads. The purple beads are double the white beads in relative value as will be explained later on. These are money.

Bead money is not by any means unknown in the South Pacific. The *brack* or

barak of the Pelew Islands was made of terracotta in bent prisms, hollow-sided, fine-grained, hard and of an almost glassy lustre. It was very valuable. In the Pelew Islands they had also *bungan* or *pangungan*, a red stone, perhaps jasper, polished like *brack*, and *kalkubut* of agate and sometimes of a hard enamel; both valuable. Common beads of white or green glass were current in four sorts among the populace, while the Kluk clan used beads of polished enamel. Beads of pearl and other sea-shells, red and other stones, nutshells, tortoiseshell, cocoanut and so on are current in various parts of the South Seas.

Figs. 14, 15, and 16 are shell money from Florida in the Solomon Islands, South Pacific. Fig. 14 shows two indivisible fathoms of rough red shell discs in a double row, separated by white discs and tagged at the ends with white discs and mother-o'-pearl and nut shells, which last two are probably charms.

Fig. 15 represents six indivisible fathom strings of white shell discs, interspersed at fixed intervals with dark ones. The white and dark discs have a relative value comparable with our silver and gold. In the Pelew seven sorts of currency are said to be thus distinguished.

Fig. 16 represents four indivisible strings of shell discs of various colours in standard fathoms, forming the regular circulating medium. They are tagged with blue native hair cloth and nutshells, perhaps as charms.

Fig. 17 is a string of shell discs, dark and white alternately, used both for ornament and currency in the Gilbert Islands, South Pacific. The string is tagged at one end with a fringe of similar shell discs. This is currency. This Pacific Islands' disc-money closely resembled the *havock* money of the Californian Indians, which consisted of clam-shell discs strung together and usually rated by the foot or yard. There is a specimen in the British Museum.

Figs. 18 to 21 show shell money in strings of discs from the Solomon Islands and New Britain, South Pacific. This is made in great lengths and divided up as required. Fig. 18 is a string of fine discs of purple shells, i.e., of the higher value from New Britain, in the British Museum; this is shown as coming from Mioko, Duke of York Group.

Fig. 19 is a string of fine discs of white shells threaded on cane strips. This is money of the lower value from New Britain. The standard length of these strings is a fathom.

Fig. 20.—This is a specimen of the *dewarra* of New Britain, made of small cowries threaded on cane strips in large or small coils. It is the common circulating medium.

Fig. 21 is a divisible string of small discs of white shells, roughly clipped, from the Solomon Islands.

Plate XIX.

Fig. 1 is another specimen of the New Britain *dewarra*, a string of small cowries strung on leaf ribs in large coils and used as money.

Fig. 4 is a string of shell discs manufactured for money only in Susa village in New Ireland, South Pacific. It has a pig's tail at each end and an oyster mother-o'-pearl charm.

Fig. 5 shows fathoms of shell discs, regularly cut, and coloured at stated intervals, indivisible, made for money in the Solomon Islands.

Fig. 6 shows long strings of irregular shell discs from the New Hebrides, South Pacific, interspersed with trade beads: about $2\frac{1}{2}$ fathoms in length and used as money.

Fig. 2 is a string of cowries, called *udang*, used in Borneo; but the shells are not found in Borneo. This is money.

Fig. 3 shows specimens of Borneo plaited fibre armlets, called *unus*, worn by the men and worth, as money, 3 cents of trade dollar money per bundle of fifteen armlets.

Fig. 7 shows a piece of cloth from Formosa ornamented with shell discs and used as an ornament for clothing, but also as currency, passing for the high local value of about five Mexican dollars.

Fig. 8 is a *tridacna* shell armlet from Malanta in the Solomon Islands, said to be used as currency for purchases of high value, but in reality it is more likely to be an article of trade or barter. Oxford Museum; presented by Edge-Partington. See Guppy, *Solomon Islands*, p. 132.

Figs. 14, 15 and 16 show cowries of sizes. The point here is that cowries are bought by local dealers wholesale by weight in sacks and retailed by tale, so that the smaller the cowries which the retail dealer can manage to pass, the greater his profit. In India the cowries of currency are large, on the West Coast of Africa they are medium, in the South Pacific they are very small.

Figs. 10 and 11 show the silver shell currency of the Shan native States of Burma, and Fig. 9 the piece of silver known as *Shan-baw*. The form of the snail-shell is, I am informed, partly artificial, thus: silver refined by the ordinary process in a rough crucible will, when very nearly pure, or what the natives call quite pure, effloresce, and if the efflorescence is checked by cold water at the right moment it will assume the shell form. So silver in that form is looked upon as pure and the silver shells pass as currency by weight. Figs. 10 and 11, the shells: Fig. 9 shows the process of manufacture. The specimens are valuable to show the development of thought and manufactured form.

Figs. 12 and 13 are a tamarind seed (*majist*) and its silver imitation, lately used in Burma, under the same name, as a royal plaything in a popular pitch and toss game, but, because of its constant weight and fineness, also as currency.

Fig. 17 shows Venetian beads used for trade in West Africa, and supplied for that purpose by the firm of M. L. Levin, a family which has been in the trade for over 100 years. They are used for money respectively as shown, for purchasing palm oil, ivory, slaves and gold. It appears that these particular beads are not interchangeable, i.e., beads for gold will not buy slaves and *vice versa*. Wealth in beads for gold will only procure gold and so on. The probable explanation is that with these beads the natives can buy from the European stores what they want according to the intrinsic European value of the beads, which varies considerably and in some cases is high, the intrinsic value representing the cost of production. In the British Museum is shown a quantity of the bead money of King Prempeh of Ashanti in necklaces, rings and armlets, taken from his hoard at the capture of his capital by Lord Wolseley many years ago. These are not shown on the plate, but many of the beads of this hoard are identical with those supplied by Mr. Levin's firm, and to be found in the present Mr. Levin's collection, which I will explain presently. There are in the British and Oxford Museums a good many cards of African trade beads well worth study, supplied by the late Mr. Levin.

Fig. 18 shows wampum beads, hand and machine made. I have already referred to wampum beads being money by law in the early American colonies, and shown strings of them. There is a quantity of evidence as to this in the paper by Mr. Stearn above quoted. The beads were of two kinds, white and purple, usually made from different parts of the same clam shell (*venus mercenaria*); and roughly the purple were double of the white shells in value. But the most interesting point about these beads is this, that so long as they were hand-made, i.e., native made, they were only used as ornaments and so on, and it was not until they were machine-made by Europeans, and so became constant as to size and intrinsic value, that they were used as money by the fathom, the fathom being a term of account at four to six beads to the penny of value or inch of measurement. The plate is from Prof. Tylor's article in vol. xxvi of this Institute's *Journal*, p. 248, and shows the difference in form and drilling between the hand-made beads which were for domestic use and the machine-made beads which were money.

Fig. 19 is a tea-brick used as currency in Eastern Asia and Tibet. The specimen in the Plate is from East Russia, and it will be seen that the brick is made of dust tea moistened and pressed into a mould into which a stamp has been screwed. It bears an official stamp and so is very near to coin in tea as already explained.

Fig. 20 is a disc of leaf-tea manufactured in Yunnan and obtained in Eastern Mongolia. This can be used in pieces for purchases of a smaller value than the whole disc. This is a currency very near to money.

Plate XX.

Figs. 1 and 2 show a war shield from Guadalcanar, South Pacific, and its cover: used chiefly for payments of a high value, such as for a wife, and to store as representatives of wealth. They are, as currency, parallels to the Karen drums already explained. Their value in English money is from £1 to 30s.

The mat money of the New Hebrides and other South Pacific Islands, of which I have no plate, affords another almost exact parallel. The mats are made in great lengths in folds and their relative value is determined by the number of the folds counted in tens and their blackness or age. This form of money is especially interesting, because it is lent out at interest, showing that it is not necessary to have bullion money, or even easily divisible or separable money, to turn it to personal pecuniary advantage. Codrington, *Melanesians*, p. 323.

Tapa, the bark-cloth money of Fiji, forms something of a parallel also. *Tapa* in masses represents accumulated capital. Ratzel, *History of Mankind*, Trans., p. 246.

Fig. 4 shows a boat-shaped wooden bowl from New Caledonia, interesting chiefly as showing a rough receptacle for shell money. Edge-Partington, Ser. III, p. 68.

Fig. 5 is a jadeite adze-blade from Marie Island in the Loyalty Islands, whose inhabitants are cannibals. It represents the price of a fat man for food. This is currency and not money, as it can also be used for the humbler purpose of carpentry.

Fig. 6 is a Navalae ring made of white quartz. These rings are from the New Hebrides and are irregular in size. They are money.

Fig. 3 is a sperm whale's tooth from Fiji, there called *tambua* and used as currency. This is currency, but tooth money has a considerable range in the South Pacific Islands; porpoise teeth and dog's teeth being also used. The dog's tooth for money must be that immediately behind the canines, and when whole and sound it is valued at one, two to five porpoise teeth according to quality, the quality being of course equal to the rareness and difficulty of production.

Fig. 7 shows the eye-teeth of the elk (*wapiti*), which pass for 25 cents of United States money amongst the Shoshone and Bannock Indians of Idaho and Montana in the United States, but only amongst the Indians themselves and not between the whites and the Indians. They are also used for the ornamental trimmings of dresses and for horse trappings, and so are currency.

Fig. 8 is a string of the lower jaws of the flying fox from the Fijis and other Melanesian Islands, used as money.

Fig. 9 is a sperm whale tooth obtained from a whaler in 1822 and used as currency.

Fig. 10 shows the so-called Caroline Islands millstone money—£. This is used in the Carolines for large payments, but is made in the Pelew Islands. It is not really a millstone at all, but a large rough stone disc with a hole in it for carrying. It is made only for money and has no other use. That shown is a small specimen, $2\frac{1}{2}$ feet diameter. F. W. Christian in *Geogr. Journ.*, xiii, 105.

We now pass on to articles made of metal. Figs. 11 to 19 are of iron.

Figs. 11 and 12 are hoes from the Dinkas and Shillooks of the White Nile. They have a fixed value, but are usable otherwise and so are currency.

Fig. 13 is a native spade-blade with a cane withy or loop for carrying, used in Central Africa as currency.

Fig. 17 is an English made spade-blade, imitating the native one. These being usable otherwise are currency. In the British Museum are three iron spades from the Dor, Upper Nile, identical with these specimens from the Oxford Museum.

Fig. 15 is a barbed spear-head from Central Africa of fixed value and usable otherwise: currency.

Fig. 14 is a conventional spear-head from Central Africa used as money.

Fig. 16 is an iron plaque used as a marriage portion from Niam Niam in Central Africa. A girl having two of these allotted to her would have no difficulty in arranging her matrimonial future and would be considered a priceless possession. This is money.

Fig. 18 is the well-known conventional Lomami spear-head, 5 feet long, and made to represent high values. Fig. 19 is a conventional Lomami spear from the Upper Congo, 5 feet long. Both of these are money.

Plate XXI.

Fig. 1 are imitation iron axes from the Ogowe River in West Africa. Fig. 2 is a bundle of five or six of these from the same district.

Figs. 5 and 6 are sets of three iron axe blades, imitation, each on a cane fastening, from West Africa.

Fig. 4 is an imitation iron adze from West Africa very like the *hashash* or imitation axe-head money of Kordofan, which runs 40 to the Turkish piastre. There is a specimen in the British Museum. Fig. 3 are similar bundles of imitation spears used by the Nagas of Manipur in Assam as money.

Figs. 7 to 11, money from ancient China, consisting of imitations in iron of well-known objects. The imitations have now, among numismatists, conventional names from their shapes. Fig. 7 is the so-called knife money. Fig. 8 and 9 is the shirt money. Fig. 11 is the razor money.

Fig. 10 is a modern cash. I have shown this as an example of development. It will be seen from the figures that the hole in the cash directly owes its existence to the hole in the handle of the old conventional money, and that the cash itself is all that remains of that old money. It is the convenient tag end that has survived through the ages.

Figs. 12 and 13 are two imitation iron hoes from the Congo, and are money.

Figs. 14 and 15 are two copper ingot crosses, both made in Urua, in Central Africa, by casting in a sand mould. They have a special rib on one side, in the centre. In the course of the down river trade the specimens shown found their way respectively to Coanza on the West Coast and to Tanganyika on the East Coast, where they were procured. They are money.

Fig. 16 is a magnetic iron hoe, called *nguni*, from Zambesi District, East Africa. This is money, no doubt on account of the peculiar property of the metal of which it is composed.

Figs. 17 to 19 shows brass and copper plates and bar iron : all specimens of currency. Fig. 17 is a set of copper plates, apparently from old sheathing, used as a marriage dowry and regarded as property. They are tied together in fours and fastened to a stick : from Nimkish, Alert Bay, N.W. America. They afford a clear parallel to the Karen drums and the Guadalcanaar shields.

Fig. 18 is a hammered brass frying-pan, partially conventionalised, still used both as currency and for domestic purposes by the Nagas of the Manipur Hills in Assam.

Fig. 19 is a bar of native-made iron, passing at a fixed value in Central Africa.

Fig. 20. Four copper bracelets, used as a wedding dowry and considered as property ; each married woman has 100 ; from Nimkish, N.W. America, currency.

Fig. 21 is the *unus* or armlet and anklet of fibre already described, worn by all Dyaks in Borneo ; currency, at five to a cent of trade-dollar money.

Fig. 23. This and those that follow are money. This is a ring of European spelter valued at 3d. on the Lower Congo.

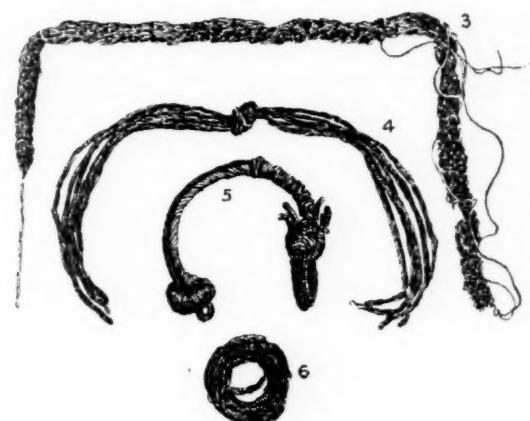
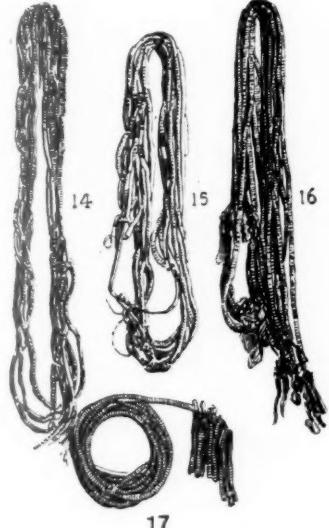
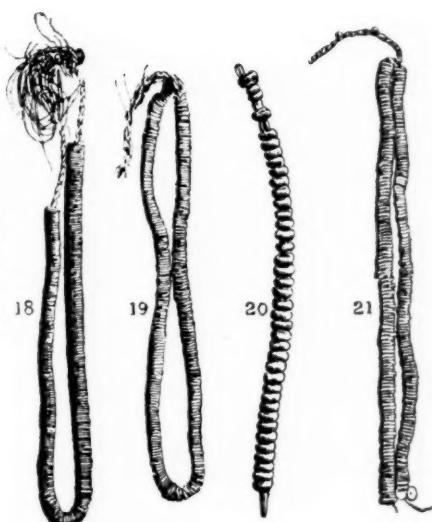
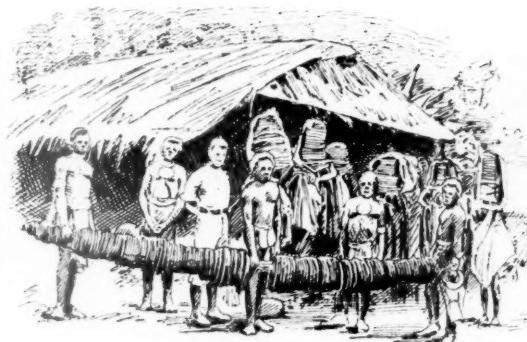
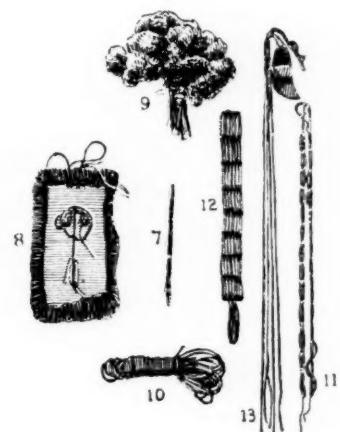
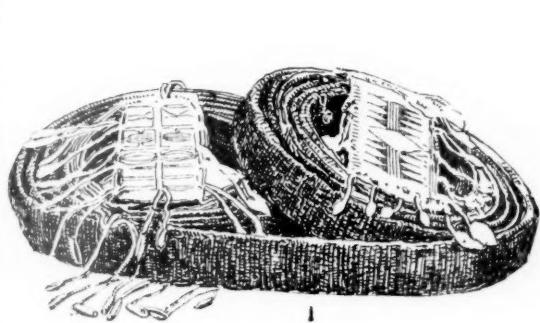
Figs. 24 and 25 are old copper and bronze manillas from the Bonny River on the West coast of Africa. They are the survivors of the old Roman and European bracelet or *armilla* through the Spaniards. They are now a well-known money in West Africa.

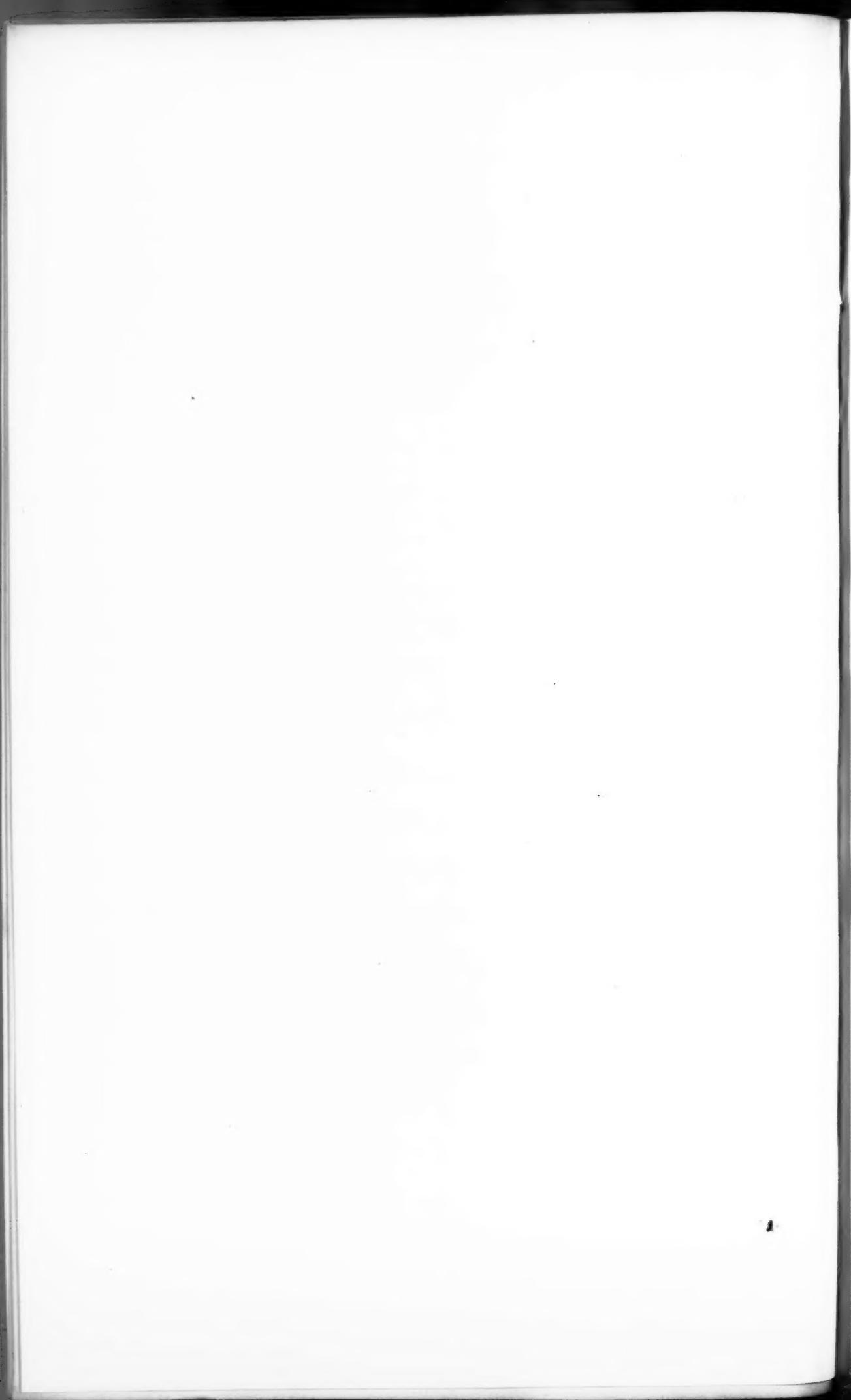
Fig. 26 are English imitation manillas for the West African trade, but they are not current in the Haussa country and thereabouts.

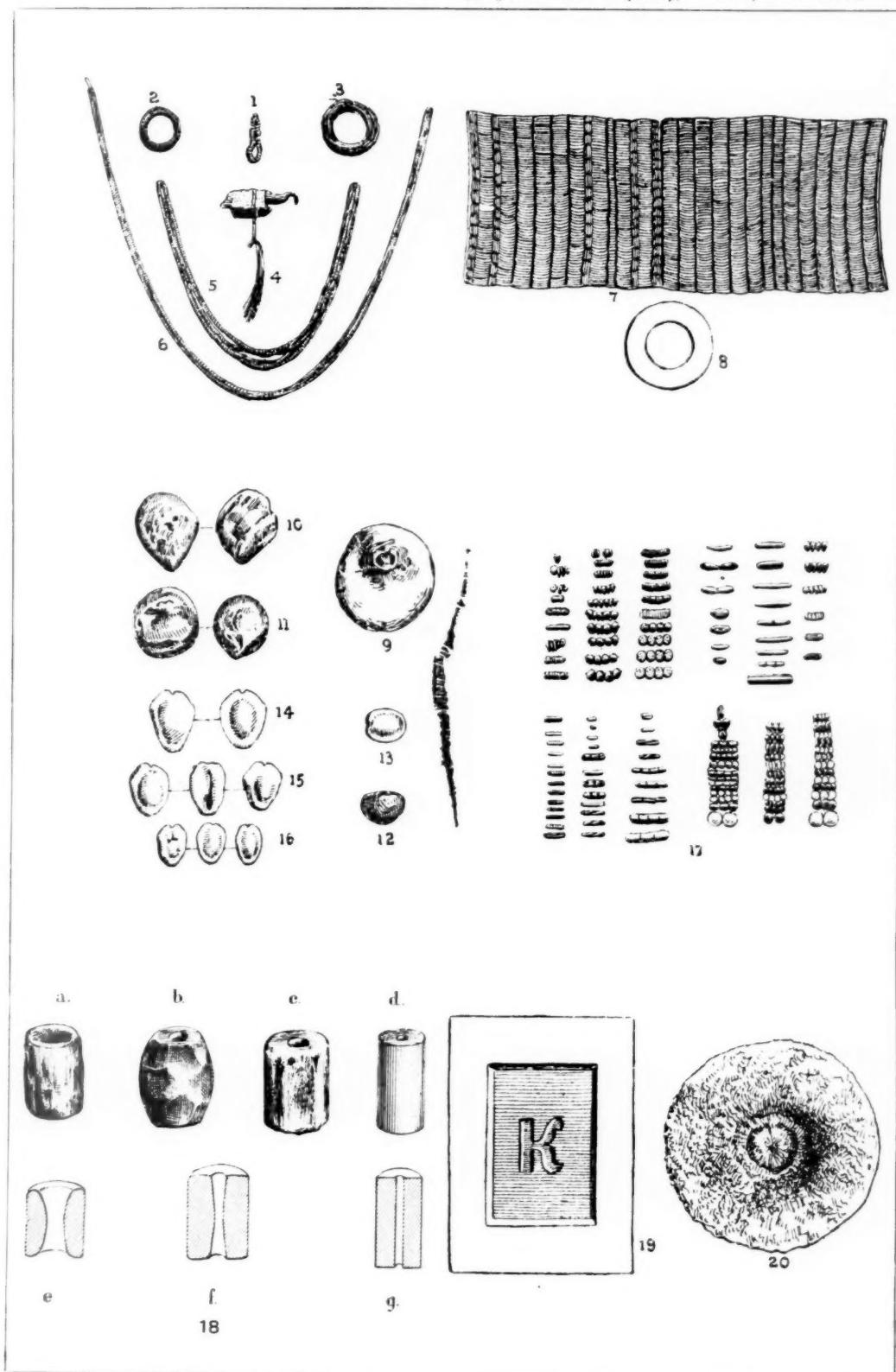
Fig. 22 are iron English imitation manillas for the Eboe country trade, West Africa.

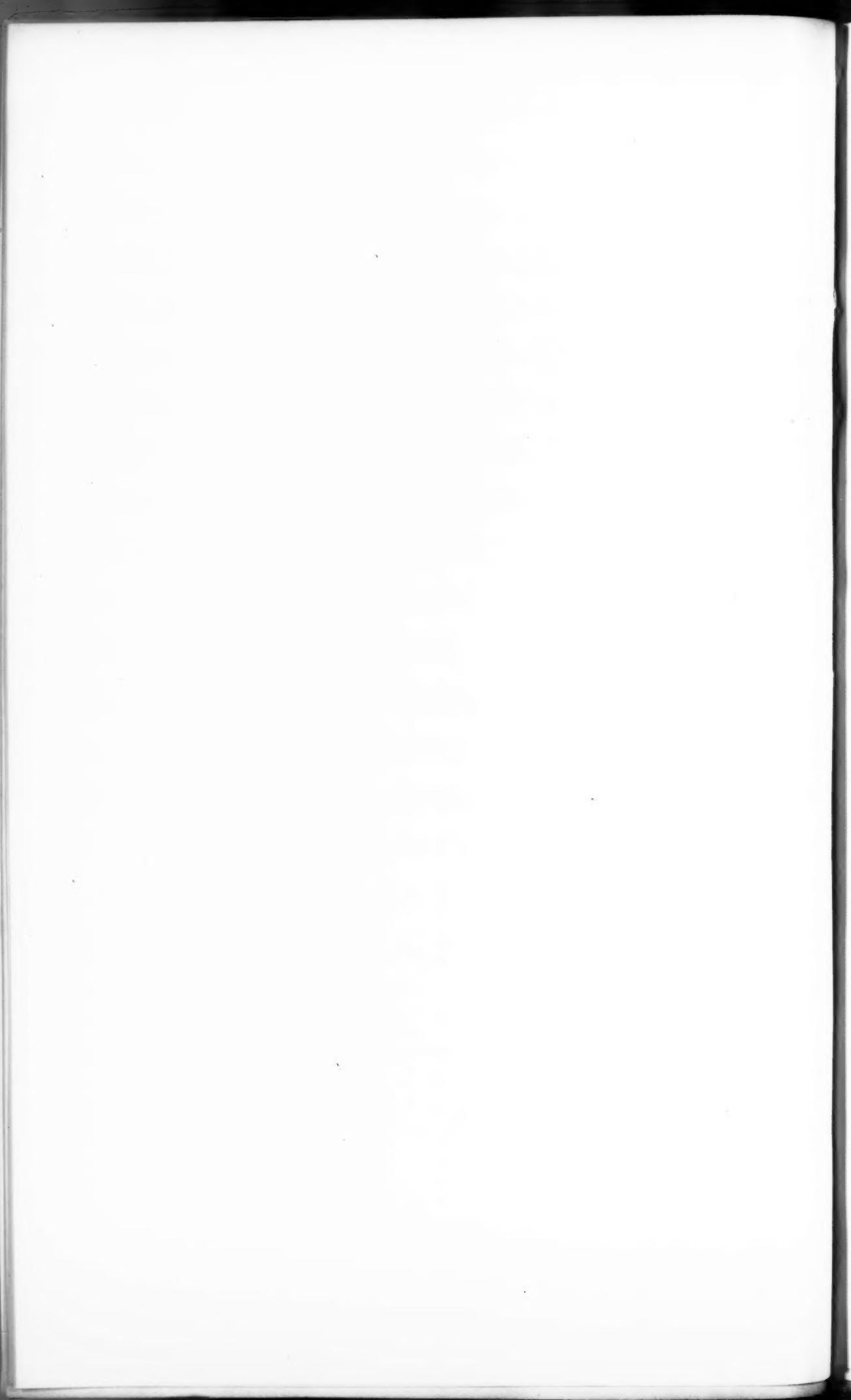
Fig. 27 is an old iron manilla from West Africa.

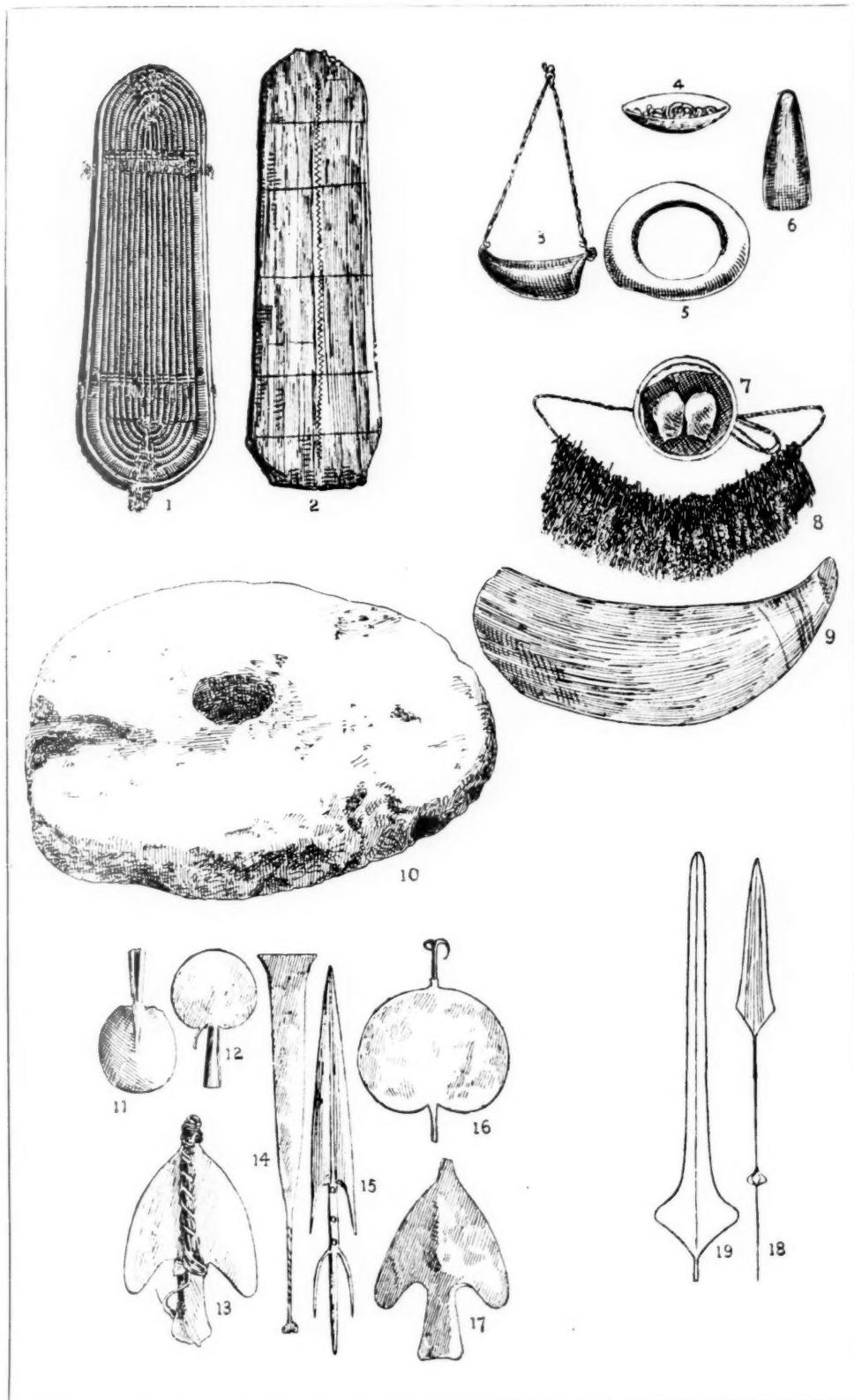
Fig. 28 is a large stone bead for purchasing slaves in West Africa.

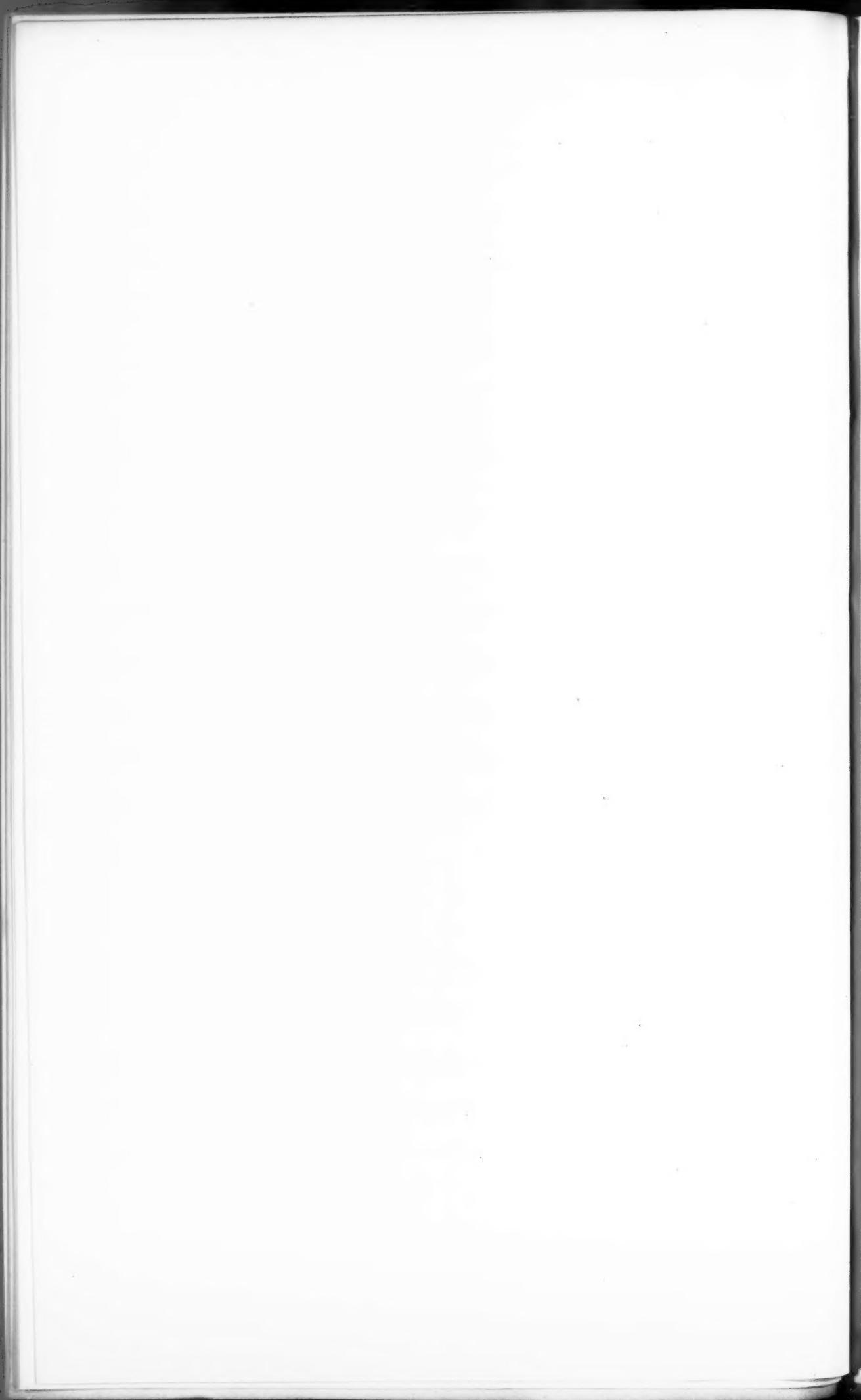




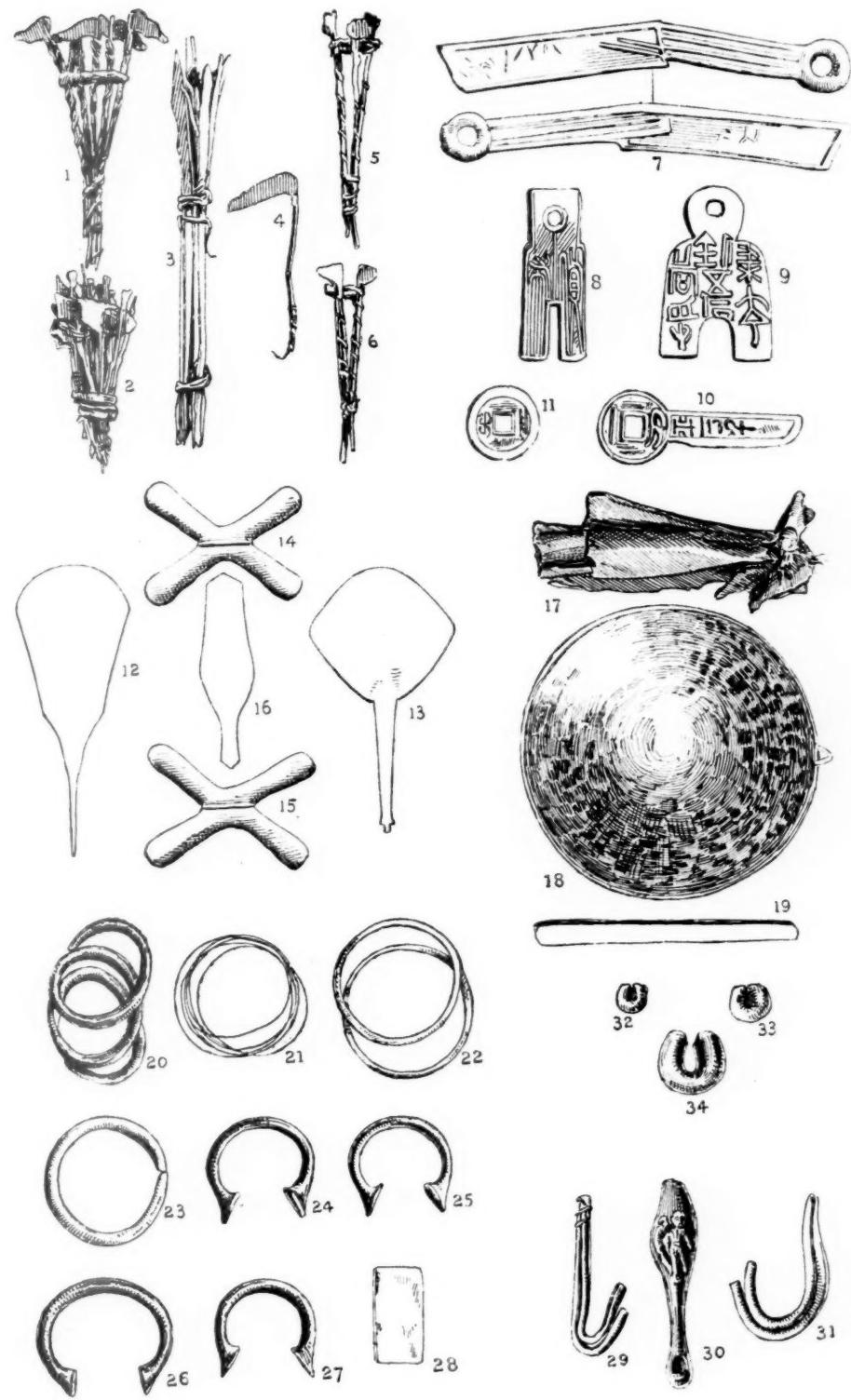


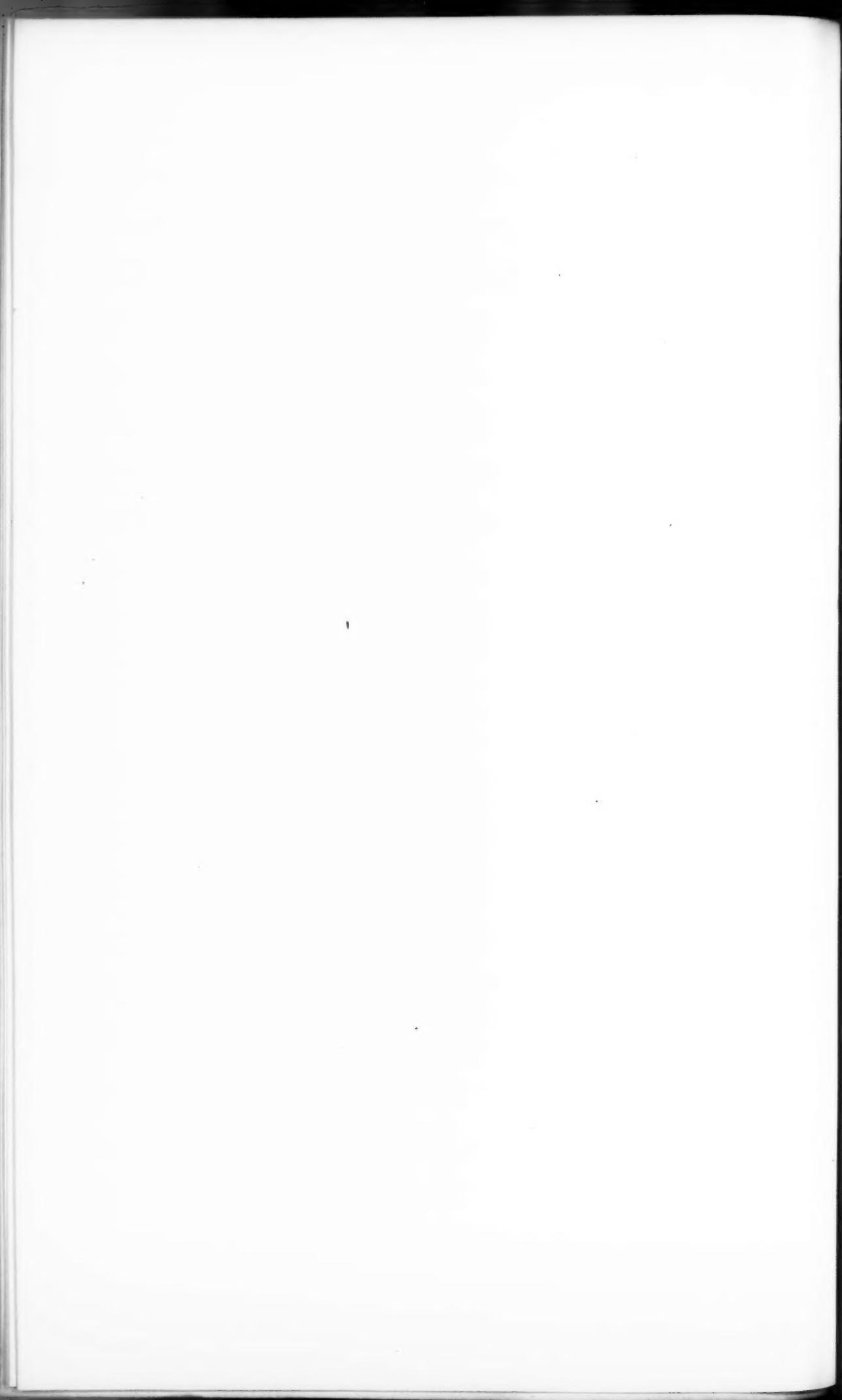






Journal of the Anthropological Institute (N.S.), Vol. II, Plate XXI.





Figs. 29 to 34 are silver money. Figs. 29 and 31 are *larins* from Persia used all over the West Coast of India, the Maldives, etc., for the last four centuries at any rate. They consist of silver wire, bent double and stamped to show fineness.

Fig. 30 is the silver fish-hook money of Ceylon similarly bent and stamped : probably grew out of the *larin*.

Figs. 32, 33 and 34 are silver *ticals* and their parts from Siam. The *tical* is a bar of silver, bent double by hammering and stamped to show fineness.

DESCRIPTION OF THE EXHIBITS.

Mr. M. L. Levin's private collection of Aggry and other (chiefly glass) beads was shown, fastened into six frames. The collection consists of specimens of beads of various kinds that have passed through the hands of the firm during the nineteenth century.

Besides Aggry beads it contains :—A series of beads meant for ornament and not for money for the East Indian trade. Bright shiny beads which are used in Africa as presents and not as money, and are known as "dashes"; they can however be used in barter and in some districts as currency. Miscellaneous beads ; Japanese, French, Chinese, African, Australian (peach stones).

Among the African beads are some shell discs and cornelian beads used in Africa, but not made there, as the Africans cannot bore cornelian : they are probably Asiatic procured in trade. One of these is ancient. Similar beads of stone are still commonly found at ancient Buddhist sites in Northern India. Other ancient African beads were also shown.

The collection further contains money-beads which are not Aggries, e.g., Kaffir money, which consists of small common glass beads in shapes peculiar to each district. With reference to the importance of form in money-beads, I may say that there were, up to the outbreak of the Transvaal War, still lying useless 2,000 lbs. weight of beads, at Johannesburg, sent there as Kaffir money; useless because they were of the wrong sort. Also in the collection are some beads which Messrs. Levin attempted to export as general, but not accurate, copies of old Aggry beads for use as money; quite unsuccessfully, however, as no variation in recognised form was acceptable to the natives as money. Blue Popo beads used for money and exceedingly valuable, being worth more than their weight in gold on the West Coast of Africa. The Venetian bead-makers at Murano, as the ultimate successors or the Phoenician and Egyptian makers, are unable to imitate these apparently simple bits of blue glass so successfully as to induce the natives to accept their products as Popo beads. Coral money-beads used on the same West Coast, equally valuable when large as the Popo beads, and worth more than their weight in gold, i.e., more than £4 the ounce.

In this connection there is a very interesting example in Mr. Levin's collection of an old red bead found in some quantities on the beach of St. Agnes in the Scilly Isles, presumably out of some wreck. These turned out to be trade beads intended for the West African trade as money, and were made in Venice. (*Notes and Queries*, 1873, p. 522.)

There are in the British Museum and Oxford Museum several cards of samples of Messrs. Levin's exportations of modern Venetian beads to Africa, both as "dashes" and as money.

The following passage from Mr. Hore's account of the twelve tribes of Tanganyika in *Journal Anthropological Institute*, xii, 1882, p. 8, is worth recording here, both for its mention of the use of glass beads for money, and for its valuable reference to the manufacture of salt for currency, as an addition to the notes already made on the subject in the body of the lecture.

"The only export of great extent from Ujiji itself is the famous packages of salt, current all over the Lake shores as a medium of barter. This salt is manufactured once a year on the banks of the Ruguvu River, east of Ujiji, where from 2,000 to 3,000 persons sometimes assemble at the proper season, just before the commencement of the rain, forming quite a town for the sole purpose of manufacturing the salt. It is packed up in cylindrical leaf packages weighing from 20 to 30 lbs. each, and value at Ujiji at about 2 yards of good calico. The market of Ujiji town consists generally of an assemblage of from 200 to 300 small booths or stalls, exposing for sale almost everything that the Lake Countries produce, as well as meat, vegetables, fruit and grain. Here for the first time we find a regular currency or money in use by the natives; it consists of strings of blue and white cylindrical beads, each string containing 20 beads. Bunches of 10 strings are called *fundo*. From 9 to 11 *fundo* are given in exchange for 4 yards of thin Manchester calico, and from 12 to 15 *fundo* for 4 yards of good heavy American calico; the value varying daily according to the quantity of cloth in the market. . . . Coloured cloths with nails and coils of copper and brass wire, are used for more extensive purchases."

In regard to Aggry beads. The exhibits consisted of samples from Mr. M. L. Levin's collection and of modern Venetian Aggries made for the existing trade in Africa and belonging to myself. All these modern beads were manufactured for Messrs. Levin at different times for the above trade.

In the Levin collection are many samples of Aggry beads, both of their own modern exportation and of genuine ancient make. Of the genuine ancient beads there are several white and speckled samples. The true Aggry bead, old or new, must be of glass, or of a substance closely resembling glass, of the same quality throughout, and in the Levin collection are two samples of Aggries cut by suspicious natives to test their quality. In both cases the outer surface was all blue, but the inner surface, and of course the ends also, had a wavy white pattern running over them. The regular continuance of this pattern throughout the inner substance of the beads was what the cutters were looking for.

The place known as Agra, in trade parlance Aggry or Aggrey, is, I am told, not the modern Accrà. It is rather an old ruined site of a former town not far inland from the West Coast of Africa, near Cape Coast Castle. It has given its name to the famous Aggry beads probably because it was once an important trading centre. The origin of the peculiar forms known as Aggry beads is somewhat thus. The

Portuguese and Spaniards succeeded, as traders on the West Coast, the Arabs who worked for Egyptian masters. The Arabs' trade was very ancient and their currency the old glass beads. The more modern Arabs first and the Europeans afterwards found that their best policy was to continue the recognised form of currency by imitating it. The modern Aggry beads are made in Venice. Ancient Aggries are very rare.

There does not appear to be much scientific information on this subject. Indeed, I am only aware of the obviously cursory paper on "Aggry beads" by Mr. J. E. Price, *Journal Anthropological Institute*, xii, 1882, p. 64, and the avowedly inconclusive notice in Brent's "Glass Beads with a Chevron Pattern," *Archæologia*, vol. xlv. But what literary evidence I have confirms the above statement, and so does an examination I was able to make, owing to the courtesy of Mr. A. J. Evans, of the splendid collection of beads in the Ashmolean Museum. This examination enables me to say with some confidence that in form, substance and manufacture all Aggries, ancient and modern, are the direct descendants of those ancient Egyptian beads which Mr. Evans tells me belong to the seventeenth and nineteenth Dynasties, especially the latter, and are characteristic of the Ramesside period. The date of these beads from the ancient Egyptian tombs may range therefore from about 1400 to 1100 B.C. As a step, perhaps, in the pedigree, Professor Ridgeway informs me that long cylindrical beads of beryl and aquamarine are found in prehistoric tombs in Rhodes, which seem to have come from mines at Zabara in Egypt. The form and shape, and perhaps substance, of these suggest the Popo beads of West Africa, which may almost be taken as a form of Aggry beads, and have precisely the same ancient history.

DISCUSSION.

Professor RIDGEWAY expressed his warm admiration for the valuable series of facts which Colonel Temple had laid before the meeting. Personally he felt gratified to find that Colonel Temple had collected so many fresh cases which supported the views that he (the speaker) had put forward in his *Origin of Metallic Currency and Weight Standards*, such, for instance, as the doctrine of conventional price, which was admirably illustrated by the case mentioned by Colonel Temple, where the price of chickens had got fixed at a rupee, because a rupee was rashly given for the first chicken bought from the natives of a certain district. He could not agree with the distinction between *currency* and *money* drawn by Colonel Temple, as he considered that it was impossible to draw a hard and fast line between them.

Colonel Temple had spoken of certain objects as having been made solely for the purpose of being used as media of exchange, such as the feather money of Santa Cruz, and the mill-stone money of the Caroline Islands. This seemed a return to the old idea that people had sat down and agreed that such and such an object should be their money without any reference to its utility. On this point he would break a lance with Colonel Temple, for he thought that we had abundant means of arguing from the known to the unknown in questions of primitive currency,

and as in all cases where there were records it was invariably discovered that the object used as a medium of exchange had originally been an object employed in daily life for some purpose or another, it was reasonable to infer that in cases such as the feather money of Santa Cruz these objects had been formerly used as ornaments of value, just as the other specimen of feather money shown by Colonel Temple on the next slide is still worn as an ornament, and just as the feathers of the royal bird of Hawaii were used both as money and ornament. He would call their attention to some objects which within a short period had passed out of use in daily life, but had remained in use as money. Every one knew that up to a few years ago stone axes were used for all purposes of daily life in New Guinea, and were one of the chief articles used in purchasing wives, etc. At the present time the iron axes brought by traders had made the stone axe obsolete for practical purposes, but they still retain their monetary value and continue to be used in the purchase of wives. Again, on the north-west coast of North America the most valuable medium of exchange was the "copper," which was worth 500 skins (beaver). He (the speaker) had not been able to give its early history in his *Metallic Currency*, but could only quote from the Canadian Government report, which said that it was a conventional money unit, but he had ventured to suggest that the "copper" was some kind of gong, as the Indians attached great importance to its sound when struck, and gongs, such as those shown on the screen, are used as money among some peoples. However, his suggestion was wrong, for he now knew that these "coppers," an example of which he exhibited, were made out of the native copper in the Chileat country north of Sitka, and were shields. The large ones had the totem in the centre. These were of great value to a warrior as defensive armour, and hence the large price which they fetched all down the coast as far as Queen Charlotte Island. With cases like these before them, he thought it was dangerous to say that the mill-stones of Caroline Islands had never had any practical use, but had been first made for the purpose of serving as money. He desired once more to express his heartiest thanks to Colonel Temple, whose kindness he had personally experienced in the past, for his most valuable lecture.

Colonel TEMPLE said that he found himself practically only called upon to reply to the remarks of Professor Ridgeway. He did not think that there was any real divergence of opinion between himself and the Professor. He had had that evening to confine himself to definitions and beginnings and their illustration, and to leave development out of his purview. Hence the peculiar cast he had had to give his paper. He agreed that it was very difficult to separate money from currency at the points where the two met, and that looked at from the standpoint of development, money in a conventional form usually arose out of currency, and sometimes the development was *vice versa*. But what he wished to insist on was that in order to adequately treat the question of the origin of money and currency it was necessary to clearly define the technical terms to be used, and this he had endeavoured to do. His illustrations and his method of describing them were intended to throw light on his argument by showing what was used as money and what as currency without reference to development.

Colonel Temple said he felt grateful for the attention accorded to his long lecture, and for the courtesy with which his propositions had been discussed by Professor Ridgeway and the other speakers.

ORDINARY MEETING.

JUNE 13TH, 1899.

C. H. READ, Esq., F.S.A., *President, in the Chair.*

The Minutes of the last Meeting were read and passed.

List of books presented to the Institute since last Meeting were read, and thanks passed to donors.

The PRESIDENT then introduced Mr. GEORGE CLINCH, who proceeded to read his paper on "Prehistoric Man in the Neighbourhood of the Kent and Surrey Border; Neolithic Age." This was well illustrated by a series of lantern slides and numerous specimens of Neolithic Implements, etc.

Discussion was carried on by Mr. ALLEN BROWN, Mr. A. L. LEWIS, Mr. WM. GOWLAND, and the PRESIDENT. Mr. CLINCH replied to the questions asked, and expressed his obligation to Professor Rupert Jones for kindly help in the preparation of his paper.

The PRESIDENT passed a vote of thanks to Mr. Clinch for a very able paper that showed both ingenuity and thought. He then asked Professor Rupert Jones to make a few remarks about a small collection of prehistoric implements presented to the Institute by Mr. Fred Swynnerton of Simla, and Professor RUPERT JONES stated that he had looked over the collection, all of which had been found at Gwalior. It contained specimens of Eoliths, mostly quartzite, and some fairly worked implements. The short paper of Mr. Swynnerton was a good account of them.

A vote of thanks was passed to Mr. Swynnerton for his paper, and the collection, and also to Professor Rupert Jones for his remarks on them.

PREHISTORIC MAN IN THE NEIGHBOURHOOD OF THE KENT
AND SURREY BORDER: NEOLITHIC AGE.

BY GEORGE CLINCH, F.G.S.

[WITH PLATES XXII AND XXIII.]

DURING the past twenty years numerous discoveries illustrative of prehistoric man have been made in the district roughly indicated by the title of this paper. The area to which the paper particularly refers is about four miles in diameter, and is pretty evenly divided by the boundary line between Kent and Surrey, the central point being the fir-crowned heights of Shirley, near Addington.

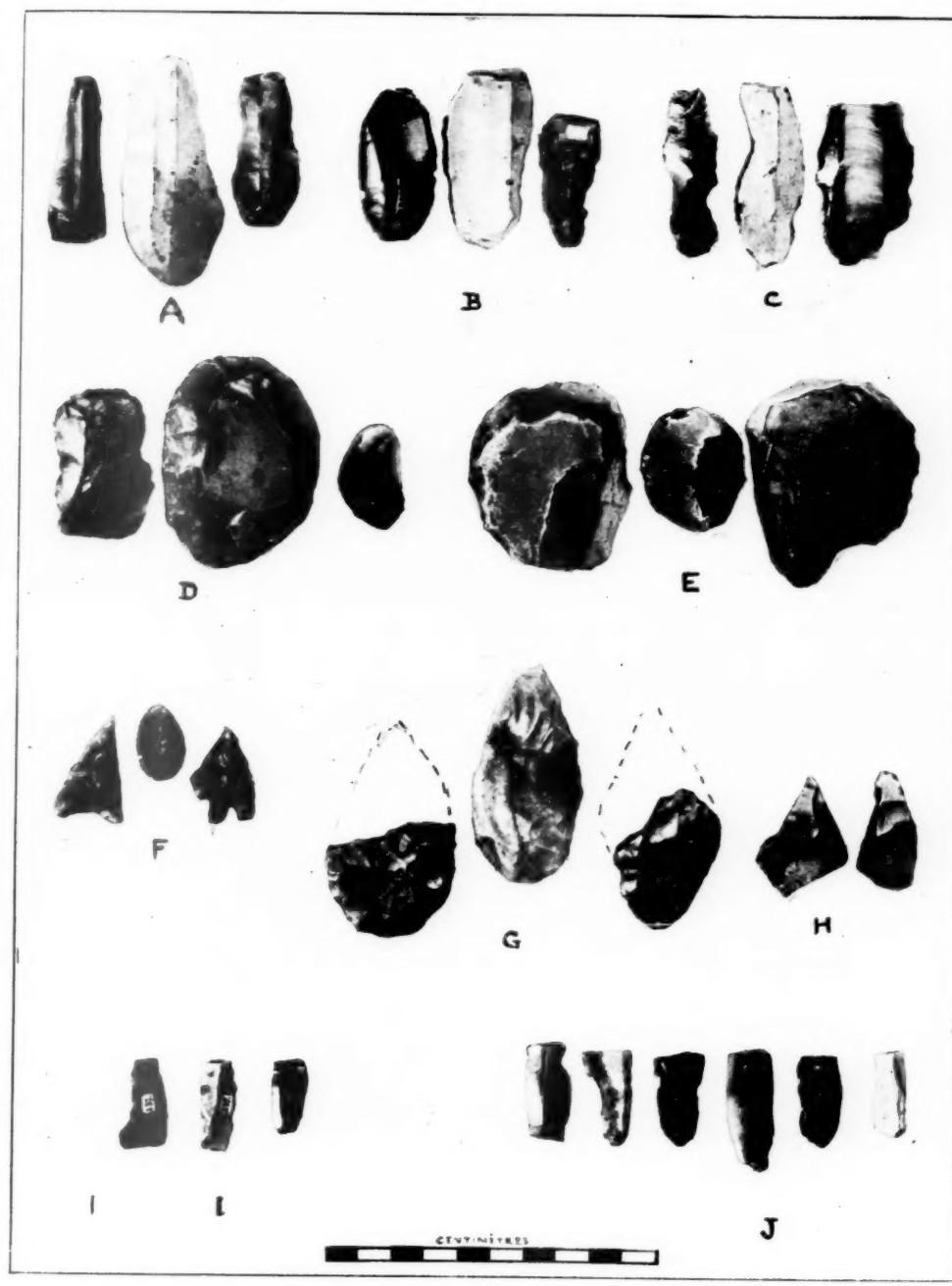
Upon the present occasion it is proposed to deal only with those remains which belong to the Neolithic Age, recent discoveries having made it possible to form a pretty complete idea of the occupations and other phases of life in the district during that period.

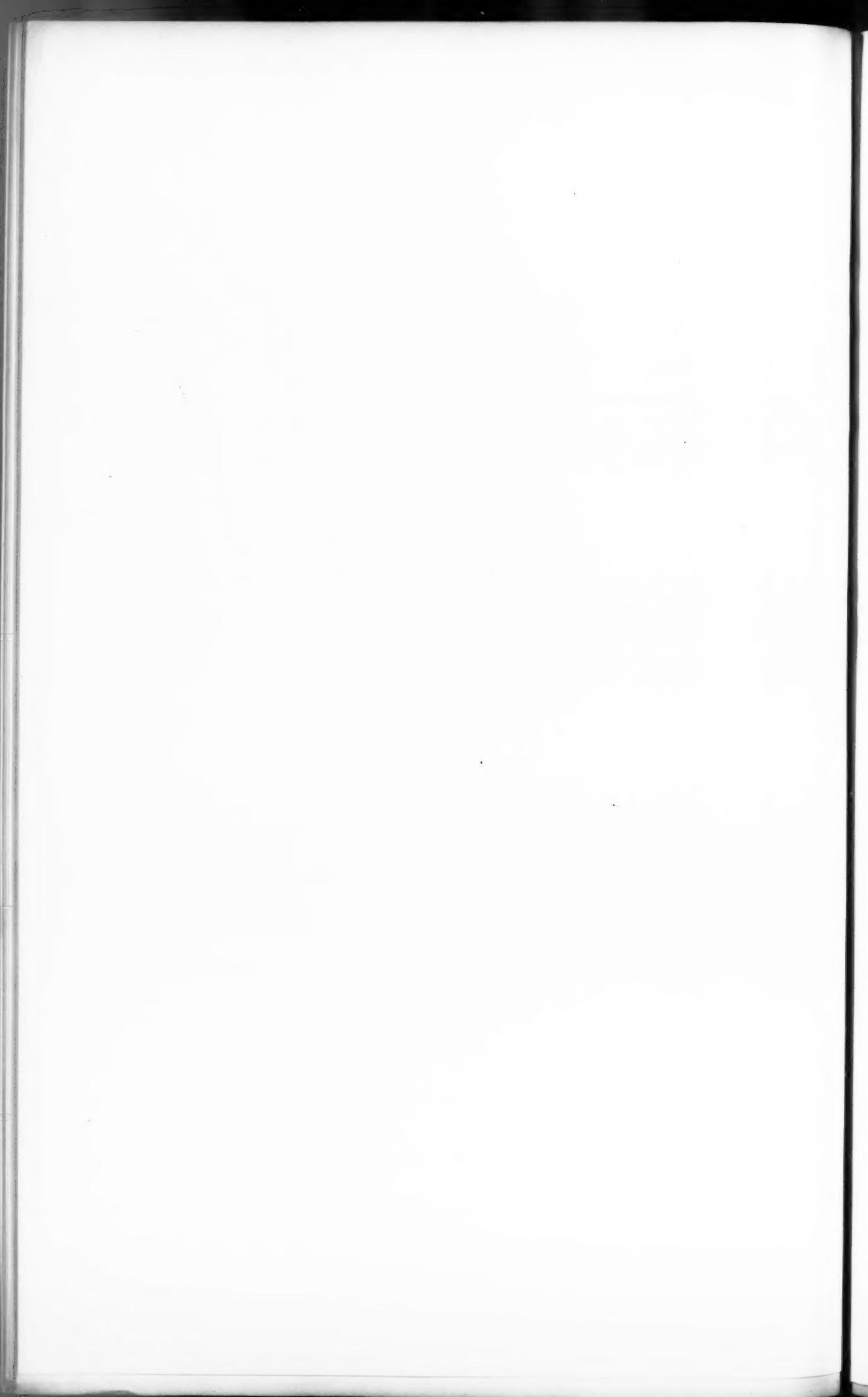
In the first place, it may be convenient to review, in a brief and general way, the more important of the discoveries which have rewarded the researches of the writer at various times. Particulars of some of them, in detail, have been published already, but it is necessary to bear in mind the drift and tendency of previously established facts before we can be in a position to appreciate the force and meaning of those which have been brought to light recently.

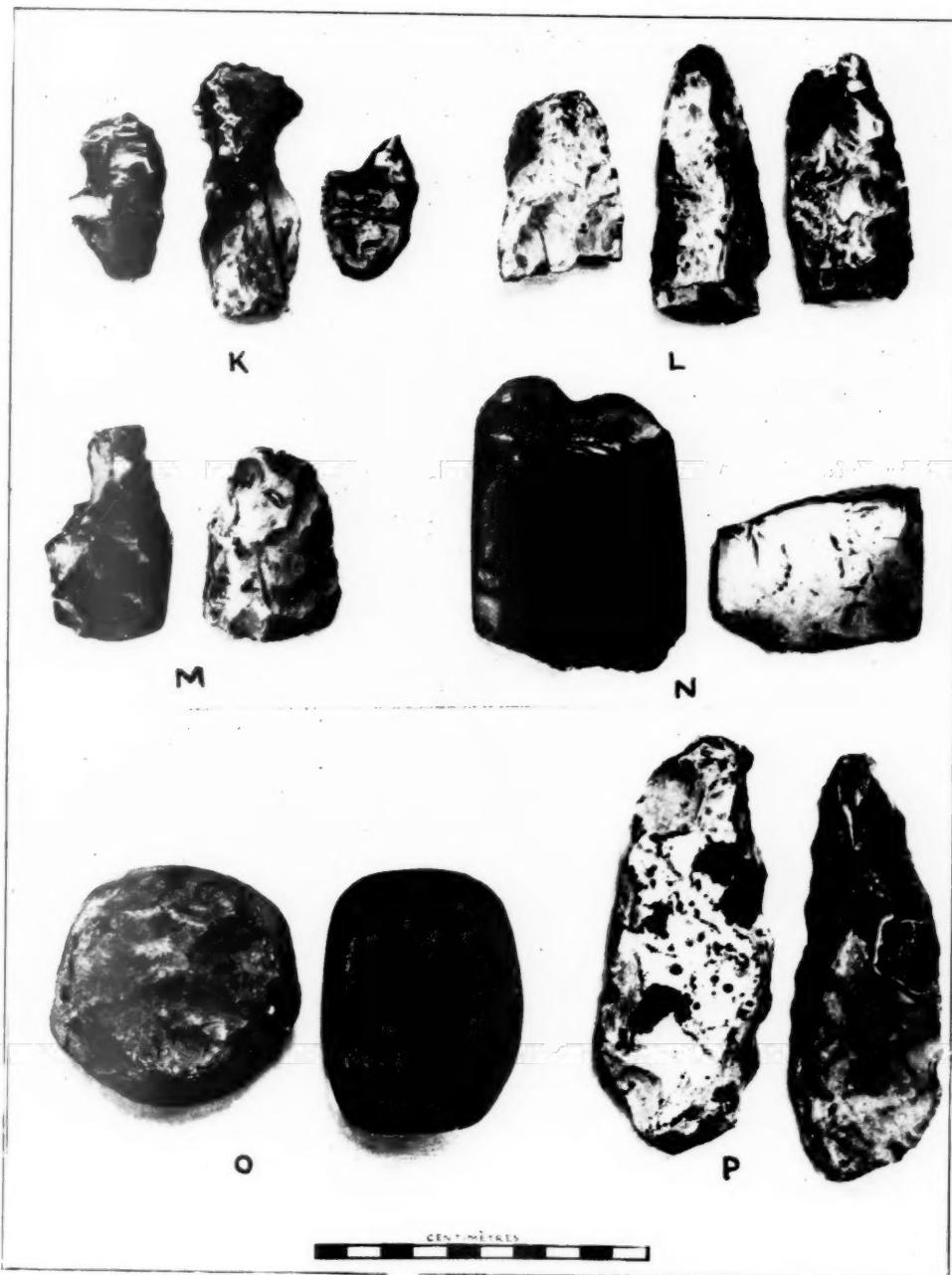
In the year 1878, and during three or four years subsequently, I found at West Wickham, Kent, a series of groups of flint implements of a character and under circumstances which suggested that they marked the sites of Neolithic dwellings. The field in which they were first found, called Moll Costen, had only for a few years been under cultivation, so, although the hut-floors had been disturbed before I had an opportunity of inspecting them, their contents had not been widely distributed, and the implements, in many cases, were pretty perfect, in strong contrast with the specimens found in the adjoining fields which had long been subjected to the operations of husbandry.

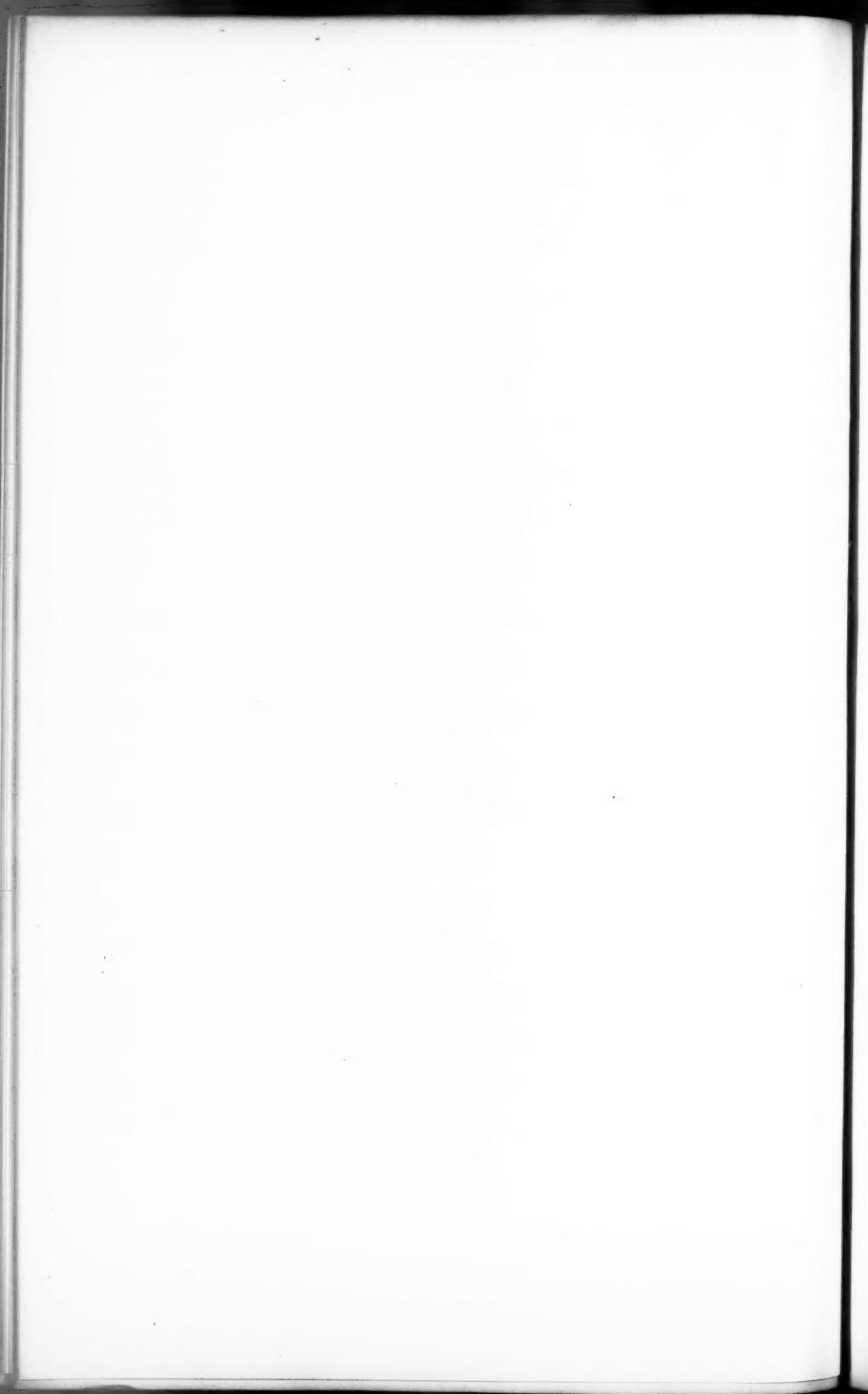
That the place was the site of a Neolithic village, rather than a mere manufactory, is clearly indicated by the domestic character of the implements, and also by the fact that several examples bear marks of having been worn down by use.

In several of the neighbouring fields in the same parish I was able to identify the sites, either separately or in groups, of human dwellings during the Neolithic Age. All these sites I have examined carefully and frequently, with the result that I have collected from them several hundreds of implements, flakes, chips, cores, and weapons.









My aim, however, was to find on some uncultivated site an undisturbed hut-floor belonging to this class, and by excavation and examination of its contents to determine, as far as might be possible, the method of construction of the dwelling and anything that was not already known about its occupants. After searching in the woods and other promising places, I found a good specimen of a pit-dwelling 6 metres in diameter in Fuller's Wood, situated near Moll Costen. This example, however, was so much overgrown by trees that it was not possible to excavate it with any prospect of a satisfactory result.

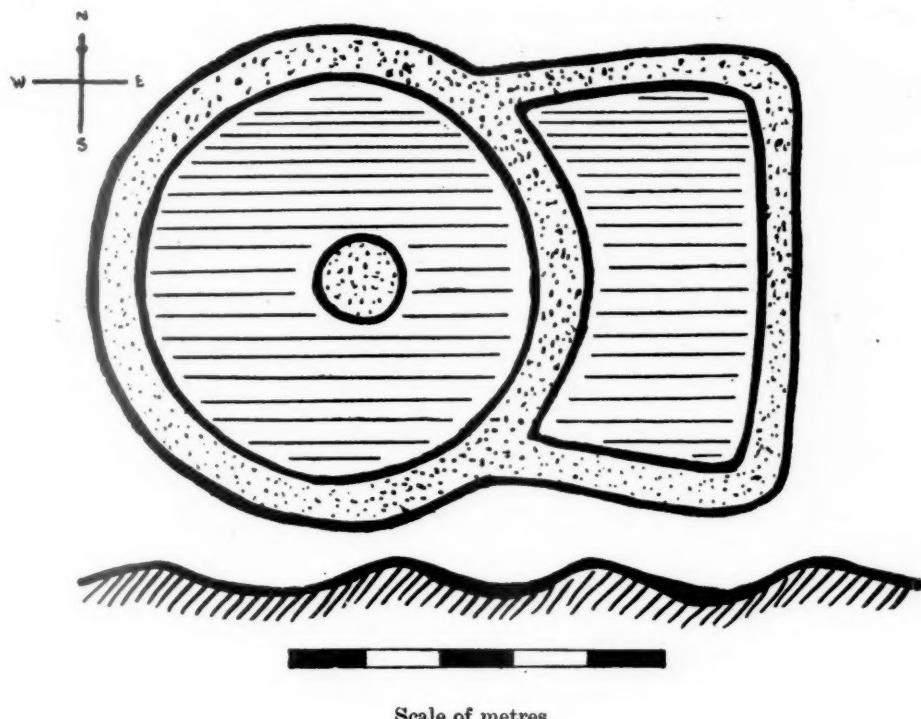


FIG. 1.—PLAN AND SECTION OF HUT—CIRCLE, HAYES COMMON, KENT.

On Hayes Common I found a large number of circular depressions which appeared to have been once the floors of huts. In the year 1878 I cut a trench through one specimen with a view of determining its origin, but beyond the fact that the ground had been disturbed to a depth of about 50 cm., my search was unsuccessful. Below that the gravel was hard and compact and had evidently never been moved. In the following year I opened other pits with equally indefinite results, no pottery, implements, or other sign of occupation being found. In one small pit, 1·25 m. in diameter, however, there were distinct indications of an ancient fire at a depth of 40 cm. from the surface of the ground. These indications consisted of roughly cubical fragments of charcoal, powdered charcoal, and a number of pebbles thoroughly reddened by severe heat.

During the following seven years further pits were excavated, but still no traces of habitation, except occasional marks of fire action, were found.

In 1886, I opened a pit of entirely different type, consisting of a large depression, nearly circular in form and 6 m. in diameter, with a conical mound in the centre, and a roughly quadrangular pit attached to it on its eastern side. In the centre of the circular pit, immediately below the central mound, I found, at a depth of 60 cm., about thirty unusually large pebbles evidently collected in this place for some definite purpose, possibly as a hearth for the fire or as a foundation to support a central pillar upon which the roof might be carried. I formed the opinion then, and I have had no reason to alter it since, that these

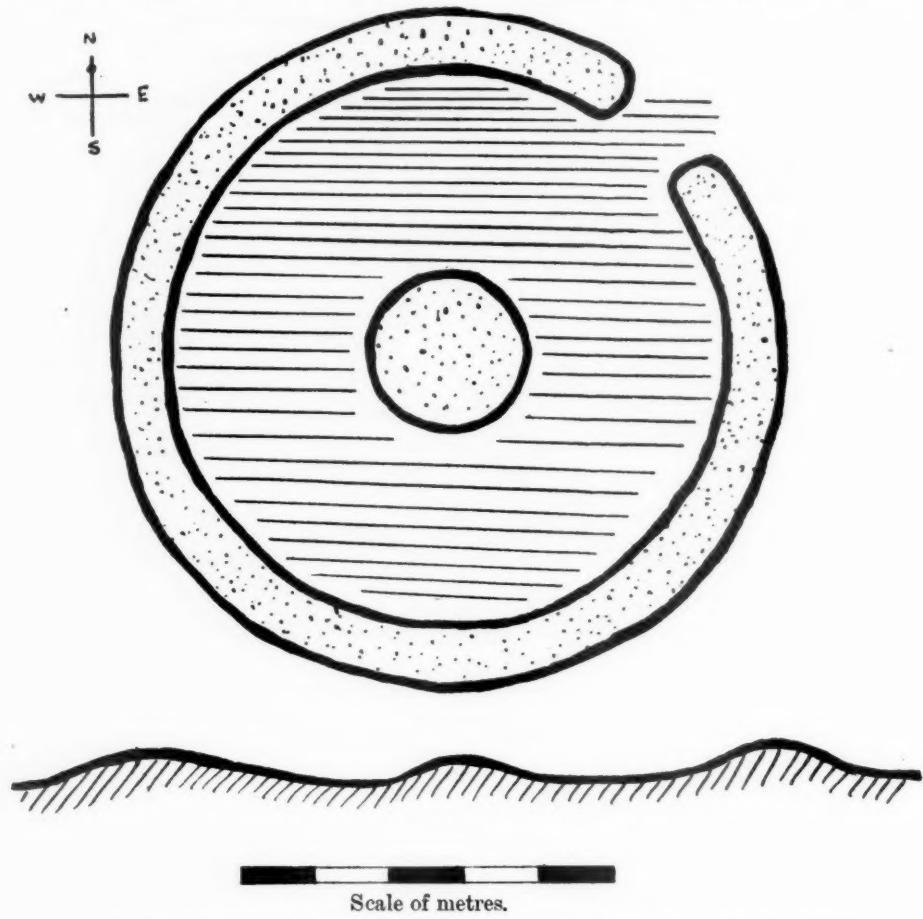


FIG. 2.—PLAN AND SECTION OF HUT-CIRCLE, HAYES COMMON, KENT.

depressions represented the floor, and the enclosing mounds represented the low walls or foundations of walls of a dwelling consisting of two apartments. In the accompanying diagram (Fig. 1) of this interesting hut-floor the straight lines represent depressions below the natural surface of the ground, and the dotted spaces indicate embankments above it.

A diagram of the ordinary type of hut-circle is shown in Fig. 2.

During the year 1886, and subsequently, I opened further pits, and after a careful examination of every example, about 150 in number, I came to the conclusion that they might be divided conveniently and reasonably into three types, viz. :—

1. Large circular pits from 3 m. to 10 m. in diameter, and from 15 cm. to 90 m. deep, surrounded by a well-defined and carefully constructed mound, in which, at one point, there was a flat space, probably representing the entrance to the hut. These pits did not show evidence of fire.
2. Large circular pits, similar in every way to those of the first type, but with a low conical mound in the centre. (See Fig. 2.)
3. Small circular pits, very even and uniform in construction, from 1·25 m. to 3 m. in diameter, without marks of entrance, and generally without an encircling mound, but always containing at a depth of about 35 cm., reddened pebbles, charred wood, and other marks of fire.

Pits of the last type would in most cases be too small for dwellings, and the question occurs whether they might not have been the sites of fires for cooking. This explanation will be dealt with later on.

There were several well-defined lines of ditch-and-mound work on Hayes Common, which appeared to have some relation to the hut-circles, but none to the existing roads across the Common. In fact, the modern roads, in some places, cut through the lines of ditches and mounds.

Extending my researches to other tracts of uncultivated land, I noticed pits similar in many respects to these at Shirley Common, and at Croham Hurst, both in Surrey. All were associated with chips, flakes, and cores of flint, apparently of Neolithic Age, but beyond this there was little positive evidence as to the period to which the dwellings, if such they were, might be assigned.

During many years the approximate age of the Hayes Common pit-dwellings remained a somewhat doubtful question, for although various circumstances pointed to their great antiquity, no sufficient evidence upon the point was forthcoming. In the year 1897, however, some building operations at Millfield, Keston, adjoining Hayes Common, led to the discovery of a pit which had unquestionably been the floor of a Neolithic workshop. Here were discovered upwards of nine hundred fragments of flint, including cores, flakes, and waste chips, and from the internal evidence, which has been set forth in detail in a paper communicated to the Society of Antiquaries of London by Mr. Philip Norman, F.S.A., the question has been settled once for all. Further particulars of this important discovery will be found in a subsequent part of this paper.

The district under consideration in the present paper does not contain rocks which would afford shelters of the kind utilised by prehistoric man in certain localities, but the necessity of some shelter during severe weather must have been felt by the inhabitants of the place during Neolithic times. It seemed worth

while, therefore, to search for traces of ancient dwellings under the shelter of such precipitous slopes as were to be found with a southern or south-western aspect. Croham Hurst, a remarkably fine tract of forest land situated about one mile south of Croydon, offered precisely those conditions of shelter from the cold winds and snow-storms of winter which would have been sought for as dwelling-places by Neolithic men and women, and to it accordingly I turned my attention.

The upper part of the hill consists of a bed of the well-rounded pebbles and sand so abundant at Shirley Common, Hayes Common, and many others places. It is in fact an outlier of the well known Oldhaven Beds. On the south side the slope of the hill averages 30 degrees. It may be explained that this steep slope is largely preserved by the vegetation consisting of heath, moss, grass, and a number of stunted oak-trees growing in abundance on the top and sides of the hill.

What happens when this vegetation is destroyed is well shown in some of the worn footpaths where the grass has been killed and the pebble beds have been disintegrated and worn down by the rain-wash in consequence.

To some extent the steep angle of the hill may be preserved by masses of ferruginous conglomerate, one large mass of which is exposed for a distance of 9 m. on the surface of the hill near the point where most of the implements have been found.

I mention these points because it is of some importance to understand the conditions which may have made it possible for an ancient excavation on the side of the hill to have been preserved to our own day. Taking all things into consideration there does not appear to be any good reason why the excavations I am about to describe should not have remained intact from Neolithic times. As far as we know the hill has been wooded from a very early period; there is practically no rain-wash on certain parts of it; and there are no disturbing forces which might cause a subsidence, or any other considerable alteration of the surface. The rolling down of a certain amount of loose matter and the accumulation of peat and decayed leaves would in the ordinary course take place, and recent excavations of the contents of the shallow pits has proved that this has happened.

The excavated sites at Croham Hurst, which I am inclined to think were occupied as dwellings in Neolithic times, are of two kinds, viz., (1) Large, circular or nearly circular, depressions in the surface from 8 m. to 17 m. in diameter and from 60 cm. to 1·6 m. deep. These are situated upon or near the crest of the hill. (2) Depressions similar to the above, but shallower and smaller, and often occurring in pairs about half-way down the steep slope of the hill.

Plentifully scattered around these pits are numerous flakes, chips, and cores of flint, but the thick covering of dead leaves and other vegetable matter makes it extremely difficult to examine the surface of the ground.

During a number of examinations of the surface I have found upwards of a hundred fragments of flint, each of which has been chipped with a definite aim, but in nearly every case, they are such as would be struck off the nodules of flint

preparatory to or in the process of making implements and flakes. Few perfectly finished flakes have been found by me, but enough to show that well-made implements have been manufactured here, and these, it is almost certain, may yet be found, if searched for, among the material which has rolled down the steep side of the hill.

In March, 1899, by the kind permission of the Governors of the Whitgift Foundation, four of these circular depressions were opened with results which, although they must be described as generally neutral, did not in any way militate against the theory of their Neolithic age.

In one large pit situated near the top of the hill and measuring 17·5 m. east and west by 15 m. north and south, and 1·6 m. deep, I dug some experimental holes from which it appeared that there was a layer of compact peat 30 cm. in thickness, under which pebble-beds were disclosed.

The earth which had been removed from this depression had apparently been deposited as an encircling mound around it, but this mound had become much flattened by weathering and other causes. The deposit of peat, 30 cm. thick, indicates considerable antiquity, as this kind of peat is not formed quickly, and the pit was not situated in a specially good position to receive or retain any large amount of vegetable matter.

Excavations in the depressions on the hill-side tended to show that there had been a certain amount of material brought down from the hill above by various causes. This is not remarkable when the steep southern slope of Croham Hurst is remembered. Nevertheless, the digging revealed a deposit of peat, 20 cm. thick in the bottom of the pits under the material brought down.

As far as I have been able to investigate the matter at present the chief evidence of the Neolithic age of these pits is to be found in the flint flakes, chips, and cores which are associated with them, and when it is remembered that no flints suitable for the purpose of making implements occur naturally on Croham Hurst, their occurrence here has greater significance than would otherwise be the case. This significance is increased by the fact that nearly every fragment of chalk-flint found on Croham Hurst has been worked, and bears an ancient and smooth surface. Further we may note that the adjacent ploughed fields (on the surface of which flints occur naturally) are thickly strewn with flakes, and other evidences of Neolithic work.¹

Thus, although the hut-floors, like those at Hayes Common, have retained scarcely any other indication of their purpose and great age except their general form, their encircling mound, and their thick deposit of peat, the associated flakes and chips of flint seem to prove pretty conclusively that Croham Hurst was occupied by man during Neolithic times, and the form of the depressions affords a strong presumption that they were the floors of the huts in which he dwelt.

¹ The worked flints here referred to are those found by Mr. Whitaker, F.R.S., and myself. I am unable to accept as genuine many so-called implements found in these fields by certain other observers.

Throughout the district the principal evidence of Neolithic times is to be found, as might be expected, in the flint implements, tools, and weapons, rather than in those objects composed of more perishable materials which must have been largely used by man. Articles made of horn, bone, and other parts of animals have, of course, entirely disappeared by the ordinary processes of decay, but some of the flint implements which were specially shaped to be fitted into bone handles have been discovered.

Before proceeding to consider the implements in detail it may be remarked that generally speaking those found at West Wickham are characterised by very skilful workmanship, which shows that the art of flint-chipping and flint-grinding had reached a high state of excellence.

The sharp-edged ground stone axe, which has been described by one eminent writer¹ on the subject as the symbol of Neolithic culture, is represented among the West Wickham implements by fragments rather than perfect specimens. My collection contains only seven examples of ground implements altogether, and of these only three are more or less fragmentary portions of regular celts or axes of any importance, the remainder having been reworked or broken to such an extent that it is not possible to say what was their original size and shape.

But I am not inclined to infer from the scarcity of this particular form of work that civilisation was at a low ebb, or the art of implement making not thoroughly understood by the people of the period and in the neighbourhood to which these remarks refer. It should be remembered that the process of grinding down a flint to a smooth surface and a sharp edge is at the best and with modern appliances a tedious and lengthy operation, even when the general shape has been roughed out by chipping. Moreover, flint was abundant and, in the hands of a skilful workman, easily and readily shaped by chipping, and it is not reasonable to suppose that any people, savage or civilised, would purposely make their implements and weapons by a slow and exceedingly laborious process when the means of producing them by a simpler, more expeditious, and equally advantageous method, were within their reach.

I am inclined rather to attribute the scarcity of ground implements to the abundance of raw material of which chipped implements could be easily manufactured, and also partly, to the absence of a suitable gritty stone in this neighbourhood upon which ground implements could be rubbed down.

Celts entirely shaped by skilful chipping are not common. I have found three fragments of such weapons, one being the pointed half and remarkable for its particularly fine workmanship. (Plate XXIII, L.)

Closely allied in form with these chipped celts are certain roughly shaped implements about 12·5 cm. in length, 4 cm. broad, 3 cm. thick, and weighing about ·5 kilos. In the boldness of the workmanship we seem to have almost a survival of palaeolithic methods, except that the results attained are

¹ Professor W. Boyd Dawkins—*Early Man in Britain*, 1880 edition, p. 274.

poorer, considered with reference to the efforts expended, than in the older implements. (Plate XXIII, p.)

It seems probable that these implements may have been intended for use as hoes, or other analogous agricultural tools, for scarifying or breaking up the surface of the ground. In order to test how they would do for such a purpose I have mounted one in a rough handle with a result which is not, perhaps, entirely unsatisfactory.

The rarity of elaborate and highly finished arrow-heads south of the River Thames is well known, and it is not surprising, therefore, that only three specimens which entirely answer to this description have been found at West Wickham. The scarcity of these objects may be explained perhaps by the theory that simpler forms of pointed flint have served as arrow-points.

Of the three elaborately worked arrow-heads found at West Wickham, there is an highly-finished example which may perhaps be compared with the best work of Neolithic times. Its form is that known as leaf-shaped, but it is rather thicker and rounder than arrow-heads of this class often are. (Plate XXII, F.)

Its length is 2·4 cm.; its breadth 1·5 cm.; and its thickness 1·2 cm.

Another example, which originally possessed two barbs and a tang, has unfortunately lost one of the barbs, but otherwise it is in good condition and its point and edges are still quite sharp. Its length is 3·2 cm.; breadth 2·2 cm.; thickness .5 cm.

The third example belongs to a class that is rare in England, but more common in Ireland. It possesses a concave, tangless base, a rather tapering point, and a somewhat one-sided appearance. Its length is 3·5 cm.; breadth 2·2 cm.; and thickness .5 cm.

It seems unlikely that these highly-finished arrow-heads, made with so much care and skill, were used for ordinary purposes. It is probable that they were produced for some special use. Arrows intended for ordinary use may have been pointed with the sharp, tapering ends of flakes, the butt ends of which were found in such abundance on the hut-floor at Millfield, already mentioned and presently to be dealt with in detail.

Many of those flakes had been broken with an oblique base, so that when the point was mounted on the arrow one angle would form a barb.

The number of pointed weapons which may have served as spear heads is rather larger than that of arrow-heads, and generally speaking their workmanship must be pronounced decidedly inferior. This may be explained by the fact that exactness in reference to poise and true balance was not so necessary in the case of a weapon held and directed by the hand as in that of a missile, such as an arrow, which was intended to be projected through the air. Accordingly, we find a comparatively large number of trimmed flakes which, although somewhat curved in longitudinal section, have probably been used for the purpose of spear-points.

It has been suggested that some of these implements which I have classed as spear-heads may have served as knives.

The implements known by the general name of scrapers, comprise such a large number of forms, sizes, and methods of manufacture, and were undoubtedly applied to so many different purposes, that it seems desirable to pay special attention to them. We have in them the Neolithic equivalent of the modern pocket-knife and the contents of a nineteenth century tool-chest—the implements, in short, with which all kinds of articles formed of wood, bone, horn, and possibly soft stone, were carved and scraped into the desired shapes. It is, therefore, a matter of considerable importance to observe the shapes of the cutting edges, the character of the marks of wear upon them, and the great variety in their strength, and size, and methods of manufacture. In size, the scrapers vary from a diameter of slightly more than 1·2 cm. to upwards of 5 cm. Although the shape is usually more or less circular, it is sometimes elongated, and sometimes flattened. There is usually a tendency more or less pronounced, towards a tang. This is developed much more in some cases than in others but it exists in all. (Plate XXII, D.)

These remarks apply mainly to what may be called the regular forms of scrapers. In addition to these there is a large number of less-perfectly shaped forms. Upwards of fifty examples of this kind were found at West Wickham. Generally speaking they may be described as rougher in style, thicker in section, and less freed from the rough, original coating of the flint, than the more regular scrapers. Yet when they are submitted to careful examination it is clear that they have been put to such a multiplicity of uses that they may be considered to be among the most interesting of the implements of the Neolithic period found in the neighbourhood of the Kent and Surrey border. (Plate XXII, E.)

In a few instances the amount of wear to which the edges of scrapers have been subjected has been so great as to produce a series of facets. The surfaces of some of the worn edges seem to have been scratched in such a way as might, perhaps, be produced by friction with sand. Other examples of wear show a considerable removal of the edge, produced apparently by a series of slight blows.

The explanation formerly given by some authorities that scrapers were used especially if not solely for the dressing of hides is not borne out by the evidence of the implements found at West Wickham. This evidence points to a much wider range of uses.

Among the class of implements known as flakes, there are some specimens of remarkable excellence of workmanship. In some the flint has been shaped with a cleanliness and precision which reminds one of the fracture of obsidian rather than of flint. (Plate XXII, A.) There is one very fine example, 5 cm. in length and triangular in section, the edges of which have been minutely serrated. It was doubtless used as a saw for some delicate work. The main part of the implements found at West Wickham, and indeed throughout the district, consists of flakes. Many of these have been carefully chipped to a point to be used as drills (Plate XXII, H): others have had semicircular indentations made in them and were probably used for shaving and rounding sticks or fragments of bone; possibly for arrow stems or needles, and there are many other forms of wear observable upon them. (Plate XXIII, L.)

Hammer-stones are represented by several large masses of tough grey flint varying in weight from .5 to 1.5 kilos. The surfaces of these hammers exhibit marks of long continued wear, as the stone is in places worn in facets. (Plate XXIII, o.)

I have one very interesting implement which appears to have served as a grain-crusher. It is a small quartzite boulder, possibly a Sarsen stone, each end of which has been considerably flattened by wear. It weighs .8 kilo. One end is worn nearly flat apparently from contact with a flat surface, whilst the other end exhibits several facets. The difference in the character of the wear on the two ends may be explained perhaps by the theory that the flat end was produced by pounding such as would be necessary to crush grain, while the faceted wear of the other end may have resulted from the irregular rotary motion employed whilst using it as a pestle in a mortar. The latter wear seems to have been caused by the action of reducing the crushed grain to fine flour.

The recent discovery of a floor on which the manufacture of a large number of flint implements had been carried on at Millfield, Keston, is of great value for many reasons, for the light it gives as to the methods adopted by the maker of flint implements; the tools he used in his work; the material he employed; and the specific purpose of the implements he produced. But perhaps its chief importance arises from the fact that it enables us to assign the pit-dwellings on Hayes Common to an approximate period.

It may be explained that the pit at Millfield, although in the parish of Keston, is quite near the groups of pit-dwellings on Hayes Common, and intimately related to them. Towards the end of the year 1897, numerous flakes and chips of flint were accidentally found by some men engaged in building operations. The fact was communicated to me by Mr. G. W. Smith, and further search was suggested. The result was that within a circular space 5 m. in diameter and from 45 cm. to 70 cm. below the surface, 958 flakes and other fragments of flint were found, consisting of :—

22 cores
461 flakes
475 waste chips
—
958

The character of these flints is precisely like that of the specimens which have for many years past been found sparsely but pretty evenly distributed over the surface of Hayes Common, but the flakes, especially those which were straight and well-formed, had in nearly every case been purposely broken, the pointed end of an acute triangular form, having in every such case been carried away, and although the material removed from the pit was screened and carefully examined, not one of these pointed ends was found. It is evident that they must have been severed from the flakes to which they belonged and carried away for some specific purpose, whether to be used as arrow-heads, or for the teeth of sickles, or for what other purpose does not seem clear.

It has been shown¹ that the undoubtedly Neolithic pit at Millfield, is in every way identical in character with the pit-dwellings on Hayes Common, except that it has lost its covering of peat. Viewed in the light of this discovery it is a comparatively easy matter to identify several groups of Neolithic dwellings on Hayes Common and numerous lines of ditch-and-mound work which may represent enclosures for the securing of the cattle belonging to the inhabitants of the dwellings. It is not difficult to understand how these dwellings were constructed. Probably an excavation from 5 m. to 10 m. in diameter was first made, circular in form and about 1 m. in greatest depth. The removed earth may then have been carefully arranged as a continuous mound around the pit, and in this mound a number of long branches of trees were probably planted, the ends of which met over the middle of the hut. A roof consisting of a thatch of heath or reeds completed the means of protection from the external elements, whilst the encircling mound would help to throw off superfluous rainfall, and afford some degree of warmth and shelter. A conjectural restoration of such a dwelling is shown in Fig. 3.

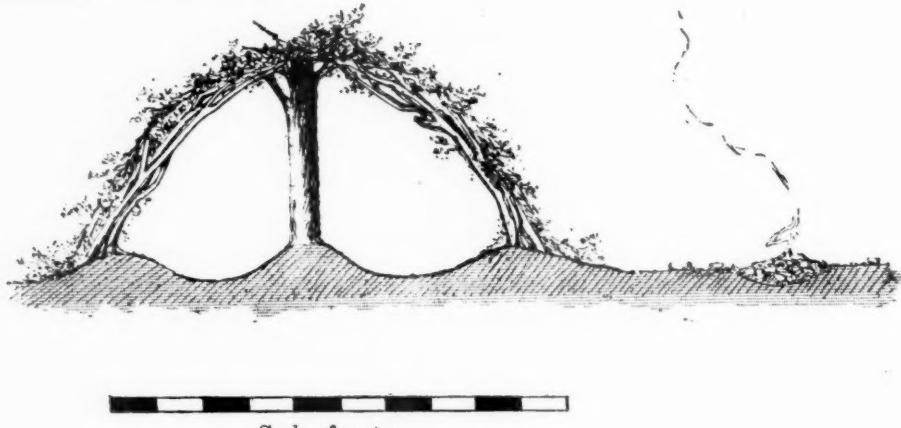


FIG. 3.—CONJECTURAL RESTORATION OF NEOLITHIC HUT WITH EXTERNAL FIRE,
HAYES COMMON, KENT.

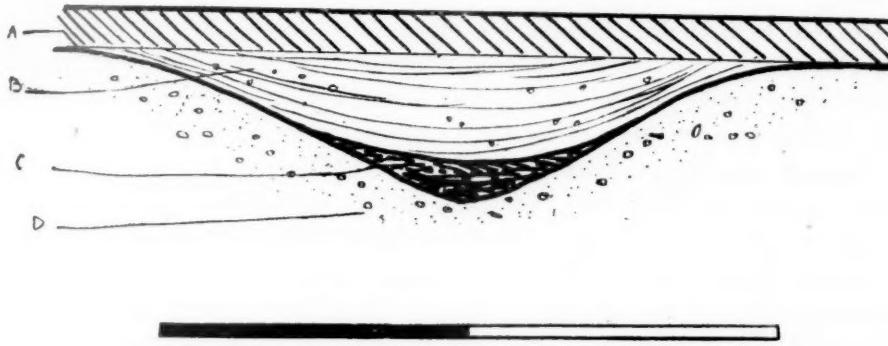
In some of the larger huts there was a raised mound in the centre on the sides of which the inhabitants may have reclined when rest was required. Sometimes, however, the mound seems to have been placed in the hut in order to support or steady the lower end of the trunk of a tree upon which the rafters of the roof rested. Owing to the highly inflammable character of the structure it would not have been safe to have a fire within the hut during very dry or windy weather; the cooking fire, therefore, would be made at a short distance from the dwelling.

The smaller depressions from 1·25 m. to 3 m. in diameter, have already been identified as the hearths upon which, or rather perhaps we should say, the holes over which fires were kindled for cooking purposes. This theory seems to afford a satisfactory explanation of the depressions, and agrees with their sizes, forms, and contents.

¹ *Proc. Soc. Antig., Lond.*, Second Series, vol. xvii, pp. 216–221.

Cooking by means of heated stones and also by heating the ground is by no means uncommon. In our own country we have a survival of such a primitive mode of cooking. In some parts of England, gypsies and country people still bake a hedgehog or other small animal by enveloping it in a covering of clay and then placing it in the midst of a fierce wood-fire made on the surface of the ground. The embers retain a considerable amount of heat for a long time, and the baking can be continued as long as is necessary without fresh fuel. When the operation is completed, the flesh of the hedgehog is said to be particularly tender, juicy, and well-flavoured. I give this upon hearsay evidence only, as I confess I have no actual experience of the matter.

The rural method of cooking potatoes in an iron pot without water and with the aperture of the pot closely stopped by a compact mass of earth, is another somewhat similar survival. In this method of cooking, as in that just described,



Scale of metres.

FIG. 4.—SECTION OF PIT CONTAINING EVIDENCES OF FIRE, WEST WICKHAM COMMON, KENT.

A. Peat and vegetable mould.
B. Sand and pebbles.

C. Bed of charcoal.
D. Undisturbed earth.

the flavour is said to be remarkably well preserved. In both cases this is doubtless due to the fact that the cooking is thorough, and that the enveloping clay makes it possible to retain those juices and flavours which would be driven off by the modern culinary methods.

In some of the islands of the North Pacific there is still in use a method of cooking whole animals by means of heated depressions in the ground, similar in all probability to that once adopted by the Neolithic tribes who resided at Hayes Common. It seems probable that this was the method of cooking generally employed by our Neolithic ancestors, and as far as we can understand the fire would have been made in the following manner. A hole was first dug in the ground from 1·25 m. to 3 m. across and about 75 cm. deep. Across this a number of dry oak branches were laid and fire was applied. Into this fire was placed the animal or joint that was required to be cooked, or if water was to be heated or a stew prepared, a number of fair-sized pebbles, placed among the burning embers, were

heated and used as pot-boilers in receptacles made of wood or other perishable substances, for it is pretty clear that no pottery was in use.

A section of one of these filled-up pits in which a cooking fire had been made was until recently well shown in the side of the gravel-pit at West Wickham Common. A diagram of this section is shown in Fig. 4. From this it will be seen that at the bottom of the pit was a mass of large fragments of wood, above which was a bed of sand and pebbles, and over all, a layer of peat and vegetable mould about 12·5 cm. thick.

It may be remarked that the evidence of the Hayes Common and West Wickham Common pit-dwellings is in accordance with the observations of Professor Boyd Dawkins,¹ who remarks that cooking operations in Neolithic times were generally carried on outside the dwelling.

The rarity of scrapers and crushers among the flint implements at Hayes Common and Croham Hurst is noteworthy. It may be accounted for, perhaps, by the fact that large pebbles suitable for use as crushers, are abundant at both of these places, and may very probably have been used as substitutes; whilst pebbles broken in halves by natural or artificial means, which are also plentiful, would make equally useful substitutes for those scrapers which are shaped by chipping.

Judging from the evidence of the implements, and from the character and amount of wear to which they have been subjected, it seems probable that the race who used them—the men and women living in the neighbourhood of the Kent and Surrey border in the Neolithic period—consisted of people of pacific occupations, tillers of the soil, and herdsmen. That they were highly accomplished in the art of making implements and weapons of flint is pretty clearly shown by the examples which have been preserved to the present day. Many of these must have been the result of much patient and skilful labour, but a large proportion have been sadly mutilated by the hard wear and rough usage of the plough-share, the harrow, the roll, and other implements used by the farmer in tilling his land in more recent years. The art of flint tool-making seems to have been carried to a high pitch of perfection at West Wickham in Neolithic times, and its pursuit probably formed the special, if not the sole, occupation of certain members of the tribe. What the implement-maker's materials were, and how he used them, we can judge from the contents of the workshop-floor at Millfield, and it is probable that we have there all that remains of the workshop from which the Neolithic tribes on Hayes Common were supplied with arrow-points, sickle-teeth, etc.

The Neolithic tribes inhabiting the district to which this paper refers would appear to have been, in a limited sense, nomadic in their habits, seldom staying long in one place but travelling about slowly, accompanied by their herds and their flocks. In the winter they would seek the shelter of the Surrey hills and in the warmer seasons they probably tilled the fertile valleys about West Wickham.

In conclusion, it may be pointed out that the evidences of prehistoric man in this country are being rapidly destroyed. In the locality to which this paper

¹ *Early Man in Britain*, 1880, p. 273.

relates the operations of the villa-builder and the pursuit of agricultural industries, but especially the former, are disturbing and obliterating these venerable and intensely interesting of British antiquities, and it is most desirable that every trace of prehistoric times should be carefully noted and recorded before these destructive influences shall have swept them entirely away.

APPENDIX.

In the following list a few particulars are given respecting the best defined and most characteristic types of implements discovered in the district to which this paper relates—a district which comprises the following parishes:—West Wickham, Hayes, and Keston, in Kent, and Shirley, Croydon, and Sanderstead, in Surrey.

In every case, except that of Millfield, which was excavated mainly by Mr. G. W. Smith, the following facts and statistics are based upon the discoveries of the writer and refer solely to specimens in his private collection.

Type A.—Simple flakes, usually triangular or quadrangular in section and from 2 cm. to 7 cm. in length.

Type B.—Flakes more or less modified or elaborated in form by secondary work.

Type C.—Flakes, much worn by use.

Type D.—Flakes converted into a more or less circular outline by means of secondary working. These are usually called scrapers, but it is evident from their varieties of form and the care with which they have been shaped that they were used for many different purposes besides the scraping of skins during the process of tanning. They were probably used for cutting and carving objects in wood and bone, and also for such work as would now be done by means of planes, adzes, etc. In several examples of these so-called scrapers there is a very decided tendency towards a tang, and a semi-circular indentation is often found on each side at the termination of the cutting edge.

Type E.—Scrapers resembling in many respects those included in type D, but more roughly formed and generally much thicker in section.

Type F.—Arrow-heads entirely shaped by minute and delicate working. Three entirely distinct forms are figured in the plate.

Type G.—Spear-heads, or possibly knives, more or less leaf-shaped in form and worked much in the same manner as arrow-heads (type F).

Type H.—Drills, formed by careful secondary working.

Type I.—Saws, usually of small size with minute indentations to serve as teeth, and a pronounced stop shown in two of the samples figured upon the lower left hand side.

Type J.—Straight and well-shaped flakes from which the pointed end has been broken off probably to serve as arrow points or sickle teeth. This type is mainly represented in the examples found at Millfield.

Type K.—Hollow scrapers. The form of these is well shown in the plate. The semi-circular indentations have been produced by very careful chipping. They have probably been used for the purpose of shaving and shaping the stems of arrows and other similar objects.

Type L.—Celts shaped entirely by chipping. The three examples figured are fragments, but that in the middle presents features of great merit and a high degree of skill.

Type M.—Celts formed partly by chipping and partly by grinding. The two examples figured have probably been intended to be hafted into a bone or wooden socket.

Type N.—Celts formed by chipping but presenting a surface almost, if not entirely, covered by subsequent grinding. Both of the specimens figured are imperfect, having been mutilated at each end.

Type O.—Hammer stones and grain crushers. The left hand specimen shown in the plate has been shaped by long continued wear into a flattened sphere. The other example is a quartzite pebble flattened at each end by wear. The material employed for these implements is almost always tough grey flint.

Type P.—Roughly shaped celt-like implements, probably hoes or similar agricultural implements. The upper end is roughly triangular in section, and was apparently intended to be bound into a cleft stick : the lower end merges into a celt-like form.

Specimens of these various types are figured upon the accompanying full-page plates (Plates XXII and XXIII). In addition to the sixteen types already described, the following may be mentioned in order to include fragments of flint which have resulted from the manufacture of implements, etc.

Type Q.—Chips—fragments of flint often retaining portions of the rough external coat of the flint nodule which have been struck off merely with the intention of reaching suitable material underneath.

Type R.—Cores—the blocks of flint from which flakes have been struck.

The distribution of these various types of implements, etc., among the different Neolithic sites identified and described in the paper is shown in the following table :—

Types.	Localities.				
	West Wickham.	Hayes Common.	Millfield, Keston.	Shirley.	Croham Hurst.
A. Flakes	881	40	61	6	90
B. Flakes with secondary work	13	—	—	—	—
C. Flakes, much worn by use	32	—	—	—	—
D. Scrapers (well formed)	30	—	—	—	—
E. Scrapers (roughly shaped)	85	5	—	—	—

Types.	Localities				
	West Wickham.	Hayes Common.	Millfield, Keston.	Shirley.	Croham Hurst.
F. Arrow-heads	9	—	—	—	—
G. Spear-heads, or knives	5	—	—	—	—
H. Drills...	13	—	—	—	—
I. Saws	12	—	—	—	—
J. Flakes from which the pointed ends have been broken.	2	—	400	—	—
K. Hollow scrapers	26	2	—	—	—
L. Celts, entirely formed by chipping	3	—	—	—	—
M. Celts, partly formed by chipping and partly by grinding.	2	—	—	—	—
N. Celts, covered with a ground surface.	3	—	—	—	—
O. Hammers	8	—	—	—	—
P. Hoes	7	—	—	—	—
Q. Chips...	549	50	475	5	48
R. Cores	40	8	22	—	5

DISCUSSION.

Mr. LEWIS wished to congratulate both the author and the Institute on the paper they had just heard. He had visited the pits on Hayes Common some twenty years ago and had not been greatly impressed by them, but he was glad Mr. Clinch had been able to find so much valuable material in connection with them. So far as he had understood there was no evidence that the fires of which traces were found in the pits might not have been of comparatively recent date. He doubted whether the circle of 50 feet diameter had been roofed over, and thought it more likely to have been an enclosure for animals. Mr. Lewis proceeded to point out the difference between the remains described by Mr. Clinch and those of dwellings found at Carnbrae in Cornwall and Grimsound and elsewhere on Dartmoor, which latter were furnished with stone seats or bed-places, hearths, and holes made in the ground and used apparently for cooking by means of heated stones, and in one at least of which holes had been found a large pot.

Mr. J. ALLEN BROWN said he knew the author many years ago when he began his investigations in Kent, and congratulated him on their result in the paper he had read, and on his having obtained the interesting collection on the table and the valuable information given as to its connection with the hut circles on Hayes Common and elsewhere in the neighbourhood. Judging from the forms and patina, the specimens appeared to be of late neolithic age, but there was no evidence of the fauna with which they were associated. There was, however, one specimen which in form and colour was quite unlike the others, and he would be glad to know under what condition it had been found, whether in peat or gravel. Its brown patina and axe-like form reminded him of the drift, although the

specimen clearly belonged to the division called neolithic. If the axe-head had been wider at the blade, thicker and less neatly made, it would then have been similar to axe-head specimens found in the river drift; as it is the implement appears to be one of those forms, belonging to a series which appears to bridge over the later palaeolithic and the later stone age, we call neolithic, as classified in the speaker's paper read at the Institute in 1892 on the "Continuity of the Palæolithic and Neolithic Periods."

Mr. W. GOWLAND remarked that the paper was one of great interest, and a very important contribution to our knowledge of the habitations of neolithic man in this country. Circular dwellings have, as is well known, been found in several localities in Britain, notably on Dartmoor and the moorlands of Yorkshire; in these, however, the floors are but little, if at all, below the surface of the surrounding ground. Those which he had examined in both the above-mentioned districts originally possessed walls of rough stones, of greater or less height, from which the roofs sprang. In their immediate neighbourhood stones suitable for building the walls occur in abundance. In the district explored by Mr. Clinch no such materials are at hand. The floor was hence, he thought with him, sunk below the surface by digging a pit in order that the roof might be of a convenient height. On the other hand, it should be remembered that in other regions of the world, as in North-Eastern Asia and the northern islands of Japan, pit-dwellings are characteristic of a rigorous climate, and form the winter habitations of men who in the summer occupy huts on the ground-level.

Circular pit-dwellings seem to be rare in England, and the author is to be congratulated on his discovery of them in Surrey and Kent. Remains of these dwellings of neolithic times are, however, widely distributed in Northern Europe and in Germany, Austria, Hungary and Switzerland, the depth of the floor below the surface varying from 1 to 1·5 metre. They are also found in France.

In the north of Portugal some have been discovered with a block of stone in the centre of the floor, upon which rested a wooden post for the support of the roof. This tends to confirm the accuracy of Mr. Clinch's explanation of the use of the small mound in the same position in the Kent and Surrey examples.

The discovery of a cooking-place outside the dwellings is of considerable importance, as, he believed, no actual remains of an external fire had hitherto been found in England. He might mention that separate places for cooking, viz., small round houses apart from the dwelling, are to be seen at the present day in Finland.

From his own experience of dwellings not differing much in construction from those described in the paper, in several of which he had lived from time to time when exploring the Shinano-Hida range of mountains in Japan, he would say that culinary operations, except on a small scale, could not be conducted inside without risk of setting fire to the roof. A fireplace apart from the hut would hence be absolutely necessary when a large animal such as a deer or boar had to be cooked for the use of the community or several families.

This outside fireplace, too, doubtless played an important part in the discovery of the metals. It was, in fact, the first smelting furnace. The high temperature which would be often reached in it, when the fire was urged by a strong wind, would be quite sufficient for the reduction of the ores of the common metals to the

metallic state; so that, whenever any stones containing these ores became accidentally imbedded in the fuel, under conditions favourable for reduction, the discovery of the metals would certainly result.

EXHIBITION OF RUDE STONE IMPLEMENTS FROM THE STATE OF GWALIOR,
CENTRAL INDIA. By FREDERICK SWYNNERTON, Esq., Simla.

THIS collection included numerous roughly-chipped fragments of jasper, chert, lydite, and other siliceous stones. Some of the objects exhibited were collected by Mr. Swynnerton from the alluvium of the plain on which the city of Gwalior stands. They occur in the gravel of the Sourka River, and throughout the alluvium on the banks to a height of at least 20 feet; and are also found scattered over the surface far from the river. Others were obtained from, or near to, the surface of the ground at Raipur, 12 miles from Gwalior. The collection also included some large quartzite implements of palaeolithic type, found on the surface at Raipur by C. Maries, Esq., of Gwalior.

SPECIAL JOINT MEETING OF THE INSTITUTE AND THE
FOLKLORE SOCIETY.

JUNE 27TH, 1899.

C. H. READ, Esq., F.S.A., *President, in the Chair.*

The CHAIRMAN explained that this Joint Meeting had been called by the desire of the Folklore Society to welcome Professor Frederick Starr of the University of Chicago, and he would therefore vacate the chair in favour of the President of the Folklore Society.

Mr. E. SIDNEY HARTLAND, F.S.A., President of the Folklore Society, then took the Chair, and expressed the thanks of his Society for the reception the Institute had given them and their friend Professor Starr, who had most generously presented the Society with the interesting objects they now saw before them, and who would favour them with some account of his collection.

Professor F. STARR, of Chicago, then gave an address explanatory of the large collection of objects illustrating the Folklore of Mexico.

The CHAIRMAN wound up the proceedings by describing the kindly reception he had received in Chicago from Professor Starr, and proposed a vote of thanks to him for his very able address, which was supported by Mr. G. L. GOMME and Mr. A. L. LEWIS, and carried unanimously.

ON THE MEDIÆVAL POPULATION OF BRISTOL.

BY DR. BEDDOE, LL.D., F.R.S.

IT is now a good many years since, to the lasting disfigurement and discredit of our ancient city, the church of St. Werburgh, with its beautiful tower, was cleared away from Corn Street. I was one of the, I believe very few, people who derived some advantage from this barbarous proceeding, of which, however, I have the satisfaction of remembering that I was one of the active opponents. A large number of skeletons was dug out from below the vaults in the church, and a good many from the churchyard adjoining, in which, however, interments had ceased for many years. The former series must have dated from before 1761, at which date the church was partially rebuilt; but they were all probably much older, in fact pretty certainly mediæval. The latter were comparatively modern, but not recent. Of the former I found 36 measurable, and of the latter 17, numbers sufficient to afford a basis of induction. Their measurements were printed in the *Bristol and Gloucestershire Archaeological Transactions*, and in my *Races of Britain*. I am not going to inflict them on you now, but will say briefly that the mediæval skulls were somewhat short, broad and, if anything, low, flattish, rounded, with rather small frontal region, but otherwise well filled. Their average breadth-index was exactly 80, *i.e.*, on the confines of mesokephaly and brachykephaly, by Topinard's notation. On the other hand, the modern skulls were mostly of quite different type; in fact not one of the 17 distinctly resembled the small round type just described, and which prevailed in the mediæval series. They were mostly rather large longish crania, nowise distinguishable from those we see on the shoulders of our neighbours in Somerset and Gloucestershire, and their average breadth-index was 76·6.

There are sundry circumstances which may influence the relation that the cranial index bears to the cephalic, the dead to the living one, for example the degree of dryness, as De Lapouge has shown. But we have most of us got into the habit of adding two degrees to the index of the skull, in order to get that of the living head. I apprehend that my distinguished friend (M. Topinard) will tell you two degrees are too much. But even if we added nothing, 80 would be a very high index for a series of 36 English skulls, while 76·6 would be a low one for the living head. The discrepancy needs explanation.

I have been disposed to attribute it to the presence in the earlier or mediæval series of a larger proportion of French blood. We know that for centuries after the Norman Conquest natives of France continued to filter into this country, where the use of the French language among the upper classes must have given the immigrants certain advantages. Moreover Bristol, perhaps more than most other English ports, carried on an active commerce with the English dominions in France,

To show the intimacy of these relations, I will quote a passage from Mr. Fuller's paper on the Tallyage of Edward II. He says that among the rebellious Bristolians in 1316, the Sheriff of Gloucestershire alleged that there were "a great multitude of evildoers, as well *men of Bayonne* as Welshmen, added to them, levied as for war against the King."

Now these men of Bayonne, or rather their posterity at the present day, are a moderately brachycephalic folk, with a living index of $83\frac{1}{2}$, according to Collignon. In other parts of Gascony the index varies, here higher, there a little lower; but, on the whole, in all the west of France, except around the embouchures of the Gironde, the Dordogne and the Charente, and in the valley of the Vienne, the headform is so broad that a large importation of the breed into Bristol might account for the phenomena.

Now lately I have gotten some evidence of another kind, which seems to point the same way. In Mr. Fuller's paper, just now quoted, are a list of nearly 1,000 persons liable to tallyage under Edward II, and one of upwards of 300 liable to pay subsidy in the first year of Edward III. I have analysed the surnames in these lists, and estimated therefrom the strength of the French element in the population. My plan is this: I take the certainly French names, such as Maltravers, Gurney, the somewhat doubtful ones, such as Tilly, Murrell, the French nicknames, as Bellamy, Blundell, Russell, names indicative of a French birthplace, as Pickard, Dole, the French trade names, as Taylor, Bullinger, and the French names of office or condition, as Clerk, Bailey; and ascertain the proportion which all these bear to the whole list of names. In Bristol, in Edward II's time, this proportion was 20 per cent. Now of course I cannot claim that this was the real proportion of the French blood-element in the population; that may have been much greater or much less. But I do think that my plan is a good one for comparing the strength of the French element in different parts of England.

Surnames were not absolutely fixed in Bristol in the early part of the fourteenth century, but they were nearly so. In the South Midland district, to judge from facts in the Hundred Rolls, they had been nearly so in the latter part of the thirteenth century. But in Wales there were no fixed surnames until very long afterwards; which may be one, but only one, of the reasons why so few Welshmen can be made out in these tallyage lists.

On applying the test described I find the French element much stronger in Bristol lists than in lists from Malmesbury, Minety or Gillingham, of about the same or an earlier date; less too than in Devonshire, though it is my belief that the French immigration into that county, chiefly from Bretagne, had been considerable. The figures are¹:

Bristol—1st list, 20 per cent.; 2nd list, 23·2. Malmesbury Abbey tenants, 11·3; Minety (Wiltshire), 8·2; Gillingham (Dorset), 11·9; Devonshire, 17 per cent. Kent, Norfolk, Suffolk, in the Hundred Rolls, vary from 15·4 to 17·3. But in the South-East Midlands the French settlers seem

¹ Bristol leaders of the King's party and of the revolters, 33 per cent.

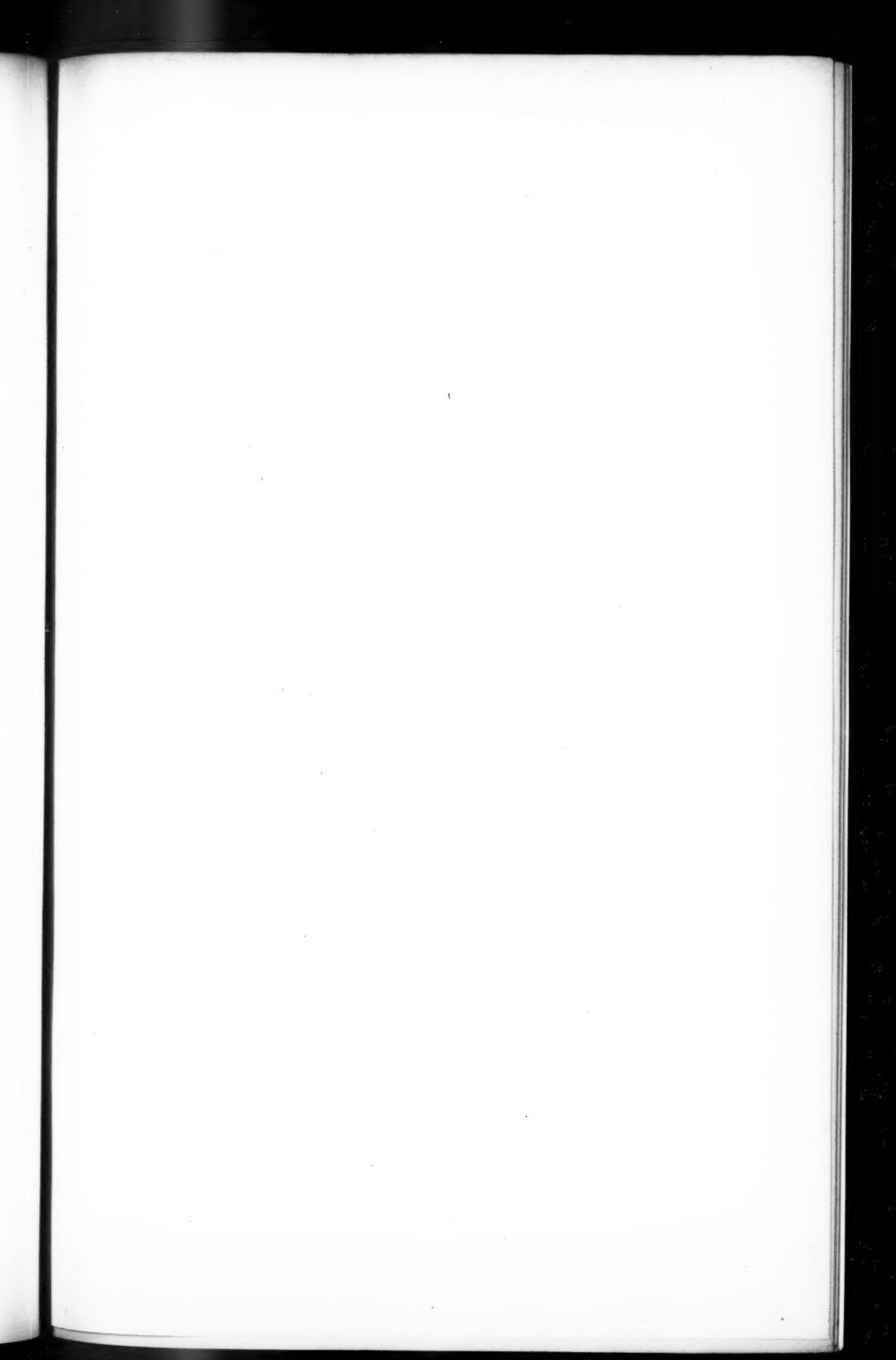
to have been very numerous, and these are just the districts respecting which the Hundred Rolls give us the fullest information. In Bedfordshire, for example, the free tenants give 39 per cent. of names of French type, the more numerous villan tenants 17; and at the present day the ratepayers of two Bedfordshire parishes give me 20 per cent. I suppose there was much infiltration of Frenchmen thither from London; and I think the prevailing form of head thereabouts is still roundish, and the stature short.

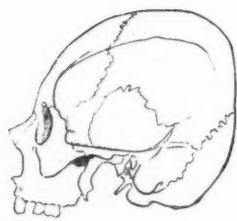
Other points notable in these Bristol lists are the fewness of patronymics, the often French type of those that do occur (*e.g.*, Everard), the scarcity of Welshmen, the great number of people designated from their trades, and the very great number bearing local specific names, such as Derby, Warminster, and the like. These immigrants would seem to have come in large proportion from other towns, rather than from the country surrounding Bristol.

Let us allow, provisionally, that the roundness of mediæval Bristolian heads may be accounted for by the largeness of the French element. Why then did this round type subsequently disappear?

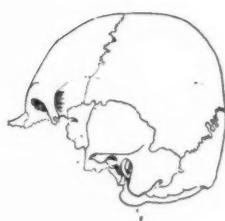
The conditions of life in mediæval cities were extremely unfavourable, and the mortality excessive. Mr. Fuller remarks that enormous changes had taken place in the constituency during the interval of fourteen years between the compilations of his two lists. The second is even more French than the first (23·2 per cent. against 20) and considering the active intercourse with Gascony and Guienne during the reign of Edward III, it may very well have been that the French element continued to increase for some time. But the subsequent loss of Aquitaine must have cut off the supply. I have analysed the list of Bristol testators in the Great Orphan Book, which has lately been edited by Mr. Edward Alexander Fry, and I find that in the fifteenth and the latter part of the fourteenth century the French element, as already defined, has decreased to 18·4 per cent. Welshmen have begun to come in and to settle—there are 2 per cent. of positively identifiable Welshmen, and 3 per cent. of probable Welshmen, Thomases and Richardses and the like. Local specific names continue very numerous, but trade names have greatly diminished; possibly they were oftener applied than acknowledged.

In the sixteenth century the French surnames had declined to 14·2 per cent.; the Welshmen and probable Welshmen, under the Tudors, were streaming in apace, and amounted to 6·4 and 8·3 respectively; and what I call the local general names, such as Hall, Green, Townsend, Atwood, names indicative of a rural origin, had much increased. Evidently the older population had largely died out or scattered itself elsewhere, and its place was being filled up from Wales, Gloucestershire and Somerset. The same processes have continued ever since, except that the Welsh immigration, contrary perhaps to what might have been expected, has rather slackened than otherwise, especially since the development of the Welsh coalfield began. In fact there are fewer Welsh surnames now in Bristol than in the sixteenth century. Irish immigration has never been considerable.

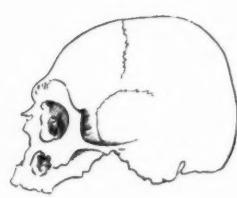




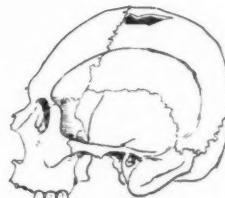
N₁.1



N₁.2



N₁.3



N₁.4

A SKULL FROM SYRIA.

NOTE ON A SKULL FROM SYRIA.

By W. L. H. DUCKWORTH, M.A., Fellow of Jesus College, Cambridge.

[WITH PLATE XXIV.]

THE specimen under consideration is the massive skull of an adult male which was picked up near Damascus after the massacres of 1860. For the loan of this specimen I am indebted to C. W. Cunnington, Esq., and I have made some notes descriptive of its more striking features. Mr. Cunnington kindly made some of the measurements which are appended.

The skull is of considerable weight and capacity (the latter being about 1650 c.c.). It bears four distinct wounds to which no doubt death was due. At the bregma is a large and nearly quadrate hole, from which the missing piece of the left parietal bone was no doubt removed by a sword cut, of which unmistakable evidence is afforded by the clean-cut character of the posterior margin (45 mm. in length). From this side, a crack or fissure traverses the left parietal bone obliquely to end eventually in the lambdoid suture. At the external angular process of the frontal bone on the left side is a large deficiency due to destruction of the superciliary margin and parts adjacent to it, leaving a depression of cup-like shape and about 20 mm. in diameter. The third wound is a clean cut 36 mm. long just above the right parietal eminence: and a fourth wound is seen as a clean-edged incision dividing the root of the left zygomatic arch. Part of the lateral margin of the skeleton of the nose is absent from the right side, but there is no certain indication that this deficiency is of a traumatic nature. However this may be, the condition of the bones of the cranial vault affords abundant evidence of violence.

Most of the teeth have dropped out, but those remaining are of large size and good quality. Otherwise the skull is in good preservation and has suffered little or nothing by weathering. Having remarked the massive glabellar prominence and other muscular ridges and prominences, the asymmetry of the specimen next demands attention. The skull is plagioccephalic. There is great parieto-occipital flattening, but this is much more marked on the right than on the left side, so that there is comparatively great backward projection on the left side of the conjoined parietal bones (the sagittal suture has long been closed by ossification). But it is remarkable that while thus laterally asymmetrical, there is no concomitant torsion or even lateral flexion of the basis cranii, and that the occipital condyles, though dissimilar in size, are on the same horizontal plane (which is a somewhat unusual occurrence in plagioccephalic crania).

From the indices (see Table) the skull will be seen to be brachycephalic,

NEW SERIES, VOL. II, Nos. 1 AND 2.

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akocephalic, orthognathous, microseme, and leptorhine. The figure representing its cubic capacity places it in the megacephalic division (Flower).

The skull may be compared in the first instance to a specimen in the museum at Nicosia, Cyprus (for a sketch of which I am indebted to my brother, the Rev. H. T. Forbes Duckworth, M.A.), in which the same features of prominent brow ridges with parieto-occipital flattening are seen to be associated. But the Nicosia skull does not present marked asymmetry.

Turning to the Syrian skulls in the Anatomical Museum at Cambridge, I will only mention here, as a full description of these skulls will shortly be published by E. M. Corner, M.A., that at least two types are recognisable, and that of skulls presenting parieto-occipital flattening of a degree comparable with that of the Damascus specimen, only one was found, whose outline is here figured (*cf.* No. 2, Fig. 2). The latter, however, while resembling the Damascus cranium in this respect, in all others resembles more closely a skull figured by Topinard and described as the artificially deformed cranium of a Maronite (*cf.* No. 1, Fig. 2). According to this author, artificial deformation is habitual among the Maronites. This must not be overlooked in basing comparisons on the contours of various crania from this region.

For accounts of other skulls from Syria, we are indebted to Pruner-Bey and Dr. Paul Langerhans. In a communication made in 1866 to the Société Anthropologique de Paris,¹ Pruner-Bey describes a series of about sixteen crania, and it is interesting to note that twelve of these were collected under similar circumstances, and at about the same time as our Damascus specimen, so that there is reason to suppose that they belonged to individuals whose lives had been lost in the massacres. Of these twelve, three present features distinctly akin to those of Arab crania, while the remaining nine are as a series characterized by the great prominence of the glabella, in addition to unusually massive mastoid processes and nuchal crests. Now it is noteworthy that Pruner-Bey, while mentioning the brachycephalic character as a feature of the group, and speculating on the cause of the parieto-occipital flattening, which is also frequently present, yet concludes that the crania represent "le type sémitique de la branche syrienne," while admitting in the next words that "par leur structure massive, par leur volume et par le grossissement des traits de la figure, ils diffèrent sensiblement du crâne arabe."

He subsequently admits the possibility of the skulls having belonged to a mixed race, and suggests that two of them may have been those of individuals with Turkish blood in their veins. As a group, however, they could not be referred to a Turanian stock.

Now from this description I think that the Damascus skull would come well into line with the nine crania described as a group by Pruner-Bey, and it may be repeated that the circumstances under which they were procured were similar. [But I do not think that from the published description Pruner-Bey is

¹ *Bulletins de la Société Anthropologique de Paris, 2^e Série, tome i, p. 563.*

justified in the conclusion that the series represents the Syrian branch of the Semitic type.]

Before continuing this discussion, it will be as well to refer to Dr. Paul Langerhans' careful paper in the *Archiv für Anthropologie*, Band vii, 1873, entitled, "Die heutige Einbewohner des Heiligen Landes." The author had at his disposal eight skulls from Es Salt, said to be relics of a skirmish between Government troops and Beduins. These specimens are not described in detail, as they are not considered of sufficiently authentic origin. Six other crania (Amman, Philadelphia) are considered to be of indubitable Beduin origin: these are dolicho-cephalic and less capacious than the Damascus cranium, and bear no general resemblance at all to that specimen. Dr. Langerhans, it should be noted, finds a difference between the true Beduin skulls and those of the peasant population of Syria, the latter possessing somewhat larger skulls than the former.

From a perusal of Dr. Langerhans' communication it will be concluded that the Damascus cranium is very improbably that of a Beduin, and having excluded that contingency as completely as possible, we may turn to the characters of the skulls of Turks, remembering that Government (*i.e.*, Turkish) troops were involved in the later stages of the "massacres," and that this consideration must not be neglected in forming an opinion of the nature of the Damascus cranium.

Taking the various descriptions of the Turkish cranium in their historical order we may note that *Vesalius* (quoted by Blumenbach, Hamy *et alii*), in his *Corporis humani fabrica* (sixteenth century), mentions the occipital flattening of the skulls of Turks, and remarks on the part played by the midwives in the artificial production of such deformity in infants (it is noteworthy that this deformation is mechanically produced in the skulls of new-born infants when the presentation, to use the language of the obstetrician, has been of the occipito-posterior variety).

Sandifort (*Tabulae craniorum diversarum nationum*, eighteenth century) figures as his typical Turkish skull, a cranium with immensely prominent glabella reminding one of the Damascus and Nicosia specimens: occipital flattening is not a feature of the figure given by Sandifort.

Blumenbach gives a series of descriptive characters of the Turkish skull which is almost completely realised by the Damascus specimen (see quotation by Davis in *Thesaurus Craniorum*, p. 124, viz., "Calvaria fere globosa: occipito scil: vix ullo, cum foramen magnum pene ad extremum baseos cranii positum sit, Frons latior. Glabella prominens").

[*Carus* figures a Turkish skull, but I have not been able to consult the reference.]

Retzius (*Ethnologische Schriften*, 1864) figures (Plate III, Fig. 6) the cranium of a Turk considered to be of typical form: the parieto-occipital flattening referred to by Blumenbach is well seen. Retzius places the Turks in his division "Brachycephalæ orthognathæ."

Davis (in the *Thesaurus Craniorum*), from the consideration of two crania of Turks in his possession, comments favourably on the accuracy of Blumenbach's description.

Weisbach, in 1873 (*Mittheilungen der Anthropologischen Gesellschaft in Wien*, p. 220) gave a description of the cranial forms of the Turks, based on the examination of about seventy crania from the suburbs of Constantinople. He admits (*cf. Hamy* in *Crania Ethnica*) that there may be included crania of "Albanesen, Tscherkessen, Syrier, Araber," but he excluded all that gave any evidence of negroid affinities. He figures a skull somewhat resembling the Nicosia specimen. Weisbach concludes from his observations that "Der Schädel der Turken ist mithin mittelgross, schwer (dick knochig), kurz, hoch, relativ breit, in sagittaler und coronaler Richtung sehr stark gewölbt"—all of which features are reproduced in the Damascus skull with the exception of the cranial capacity which renders necessary the substitution of the term megacephalic for "mittelgross."

Flower (*Catal. Roy. Coll. Surg.*), however, records the capacities of two crania of Turks, and these are respectively as great as and greater than that of the Damascus specimen. Capacities of over 1,600 c.c. are also quoted by other authors.

Hamy in *l'Anthropologie*, 1895, insists on the "aplatissement pariéto-occipital commun à tous les Tures" and the development in vertical height: and the same author in *Crania Ethnica* (wherein an extensive bibliography will be found), gives a remarkable note in describing the southward expansion of the Turks into Syria, where they are said to have produced a marked influence as far as "la montagne des Ansariés" and "les Yéhalines." "La montagne des Ansariés" may be presumed to be the range of that name to the north of the Lebanon. The note just referred to deals with the characters of skulls measured by M. León Cahun, who obtained them when on a scientific mission to "la montagne des Ansariés." The quotation runs as follows: "Cinq crânes d'Ansariés de Kerdaha près Calbié sur sept recueillis par le voyageur, offrent la déformation pariéto-occipitale plus accusée à droite qu'à gauche. Ils ont en commun l'indice 84·57 diam. a-p. 175 diam. tr. max. 148." And certainly the specimen figured in *Crania Ethnica* is not lacking in other resemblances to the Damascus cranium, in which, as has been already indicated, the parieto-occipital flattening is more accentuated on the right than on the left side (just as in the Ansariés). The religion which has gained their peculiar name for the Ansariés seems to have been practised in Northern Syria for the last thousand years (*cf. Lyde, The Asian Mystery*, p. 67). Lieut. Walpole (*The Ansayrii*, vol. iii, p. 342) indeed suggests that they are referred to even by Pliny, and adds a note as to their physical appearance, "They are a fine large race with more bone and muscle than is generally found among Orientals: browner than the Osmanlee but lighter, fairer than the Arab." Walpole moreover recognises that their numbers have been recruited from very various ethnical sources.

Dr. v. Luschan has in the *Archiv für Anthropologie* (Bd. 19, 1891) recorded the results of an enquiry into the cranial forms of inhabitants of Lykia, and finds that brachycephalic crania are there as frequent as the dolichocephalic

varieties; he further refers certain hypsi-brachycephalic crania to what he calls an "armenische" or "armenoide" race: as similar skull-forms occurred on two occasions in very ancient graves, v. Luschan bases hereon a theory of the existence of an aboriginal "Armenian" race in this region. The Damascus skull agrees with some of these skulls from Lykia in being hypsi-brachycephalic, and with the "Armenian" skull figured in Dr. von Luschan's paper (Fig. 17) in its general contour.

Professor Sergi in his *Ursprung des Mittelländischen Stammes* describes various skull-forms occurring on the Mediterranean shores, but the Damascus skull can be referred to no form considered by Sergi to be characteristic of the "Mediterranean" race: on the other hand its rotundity and elevated character assign to it a place among the crania compared by Sergi (*Ursprung des Mittelländischen Stammes*—Deutsch von Dr. Byhan, p. 134) to Mongolian skulls.

Finally, the frequency of occurrence of brachycephalic crania in Asia Minor is further insisted on by Elisyeef (who found the average breadth index to be 86, the number of observations being 143) and Chantre (breadth index: average of 120 observations on males, 84·5). The two latter observations are quoted by Ripley in his *Races of Europe* (1899).

The attempt to sum up the evidence may now be made, and it will, I think, lead to the following conclusions:—

- (i.) That the Damascus cranium is very similar in general contour and especially in the peculiar character of its asymmetry to certain skulls from "la montagne des Ansariés" (one of which is figured in *Crania Ethnica*, Plate LXXXV, Figs. 3 and 4), immediately to the north of the Lebanon range.
- (ii.) That the Damascus cranium resembles nine of the skulls obtained in Syria under similar circumstances by M. Girard de Rialle, and described by Pruner-Bey in the *Bulletin de la Société Anthropologique de Paris* (1866, p. 563 *et seq.*).
- (iii.) That the Damascus cranium resembles skulls described or figured by Sandifort, Blumenbach, Davis, Weisbach, Flower, Hamy, *et alii*, as typical Turkish crania, and also, in certain features, the skull in the Museum at Nicosia.
- (iv.) That the description of the Damascus cranium as representing a form common among peoples of Turkish origin, is not prejudiced by the fact that Pruner-Bey ascribed the nine skulls (referred to in conclusion ii, as similar to the Damascus cranium) to the Syrian branch of the Semitic type, considering they did not correspond to any Turanian type. For as regards the Syrian branch of the Semitic type, the features in which the said nine skulls resemble that somewhat vaguely defined cranial form are not clearly stated by Pruner-Bey, whereas the clearly specified features wherein they depart from the Arab type of cranium are the very characters which one would from

the study of the various works quoted, bring together as typical of the skulls of Turks.

- (v.) That if the argument in No. iv. is sound, the Damascus skull and skulls like it might warrantably be described as Turanian as this type is understood by some authors (*ex. gr.* von Hölder), but that as descriptive of cranial forms, such terms as Turanian and Semitic are better avoided until they have been more clearly defined.
- (vi.) Lastly, that large heavy-browed massive skulls with occipital flattening occur in many localities adjacent to the eastern shores of the Mediterranean; they seem to be associated with the Turkish inhabitants of those regions, and when they combine a high altitudinal index with distinct brachycephaly, are compared by Sergi to "Mongolian" crania. They thus come into line with certain crania found in the Crimea by Demidoff (*cf. Exploration de la Russie méridionale*), in Kurdistan (*cf. Crania Ethnica*), and lastly, they have some points of resemblance to a skull found in Eastern Turkestan which is mentioned in an elaborate memoir by Professor Rudolf Hoernle in the *Transactions of the Royal Asiatic Society*. The specimen, which was found in a mound with a number of MSS., and is at present deposited in the Cambridge collection, is a short broad skull with the same parieto-occipital flattening as the Damascus skull, from which, however, it differs in being much less massive. It is to be hoped that future research will enable the whole of the lacunæ between the foregoing examples to be filled up, till a completely imperceptible transition from one form to another shall be demonstrable.

Dimensions, etc., of a Syrian Skull. From near Damascus, picked up after the massacre of 1860 :

Maximum length	...	...	...	...	180
Ophryeo-iniac length	...	...	...	...	180
Maximum breadth	...	...	...	...	148
Bi-auricular breadth	...	...	...	...	131
Bi-stephanic breadth	...	...	...	...	120
Bi-zygomatic breadth	...	...	...	...	144
Measurement from Basion to Glabella	...				116
" "	"	Nasion	...		107
" "	"	Alveolar point	...		105
" "	"	Bregma	...		152
" "	"	Obelion	...		145
" "	"	Lambda	...		119
" "	"	Inion...	...		78
" "	"	Opisthion	...		37
Orbital height	...	...	...	...	34

Orbital breadth	...	...	...	...	43
Nasal height	...	...	...	...	57
Nasal width	...	...	...	...	25
Palato-maxillary length	...	...	...	...	57
Palato-maxillary breadth	...	...	...	...	68
Jugo-nasal arc	...	...	...	...	115
Jugo-nasal width	...	...	...	...	101
Horizontal circumference	...	...	...	...	526
Radii :					
Auriculo-Alveolar	...	...	...	...	106
-Nasal	...	...	...	...	101
-Glabellar	...	...	...	...	108
-Bregmatic	...	...	...	...	139
-Obelial	...	...	...	...	135
-Lambdoid	...	...	...	...	112
-Iniac	...	...	...	...	81

INDICES.

Cephalic (or breadth)	...	...	...	...	82·2
Altitudinal (or height)	...	...	...	...	84·4
Alveolar	...	...	...	...	98·1
Orbital	...	...	...	...	79·1
Nasal	...	...	...	...	43·8
Palato-maxillary (Flower)	...	...	...	...	119·3
Naso-malar	...	...	...	...	113·8
Facial (Kollmann)	...	...	...	...	53·4
Stephano-zygomatic	...	...	...	...	83·4
Other measurements and indices :					
Nasi-alveolar length	...	...	...	...	77
Angle of Cloquet	...	...	...	...	68°
Angle of Jacquot	...	...	...	...	74°
Cubic capacity	...	...	...	...	1,650

The illustrations accompanying this note are :—

Fig. 1.—The Damascus Cranium in Norma Lateralis : left side.

„ 2.—Outline tracings of four crania all reduced to the same dimensions (i.e., the naso-lambdoid line is identical throughout the series).

No. 1.—Simple deformation in a Maronite skull (from Topinard).

„ 2.—Specimen 1237 in the Cambridge Anatomical Museum [a skull from Bassus Tower, Syria, forming part of the Tyrwhitt Drake Collection].

„ 3.—A skull in the Nicosia Museum, Cyprus.

„ 4.—The Damascus skull.

SOME AUSTRALIAN TREE CARVINGS.

BY HERBERT PERKINS.

[WITH PLATES XXV TO XXVII.]

THE originals of my photographs are in the Australian Museum, Sydney. They form a collection unique of its kind, consisting of twenty-two logs or trunks of trees that have been cut down in various localities and presented to the Museum at different times. Through the kind permission extended to me by the trustees of the institution and its curator, Robert Etheridge, Esq., Junr., I was enabled to have a series of twelve photographs of them taken for the purpose of illustrating this article.

Unfortunately there is very little known of the history of these carvings, or of their actual meaning. What they are intended to represent or commemorate is very largely a matter of conjecture.

"In fact," as Mr. Etheridge, to whom I am indebted for my rather meagre information, said to me, "we know absolutely nothing reliable about them. Where some lingering native tradition has survived it has been embodied in the label attached to the exhibit. It is, however, known that all these carvings are of an earlier date than the exploration and settlement of the country by Europeans, and there is no instance on record of similar work having been done by the aborigines since that time."

It has also been ascertained that the area over which they are distributed is very limited. It may be roughly described as a long narrow strip of country running north and south, on the western side of and nearly parallel to the main range, and wholly situated in the central portion of the Colony of New South Wales.

Outside these limits similar tree carvings have not, I believe, been discovered in Australia.

In the Museum are six photographs showing the trees as they actually appeared standing in the bush, and I may mention here that all the carved trees found were dead ones. Of these there is no further information obtainable other than what the various labels state, which are as follows:—

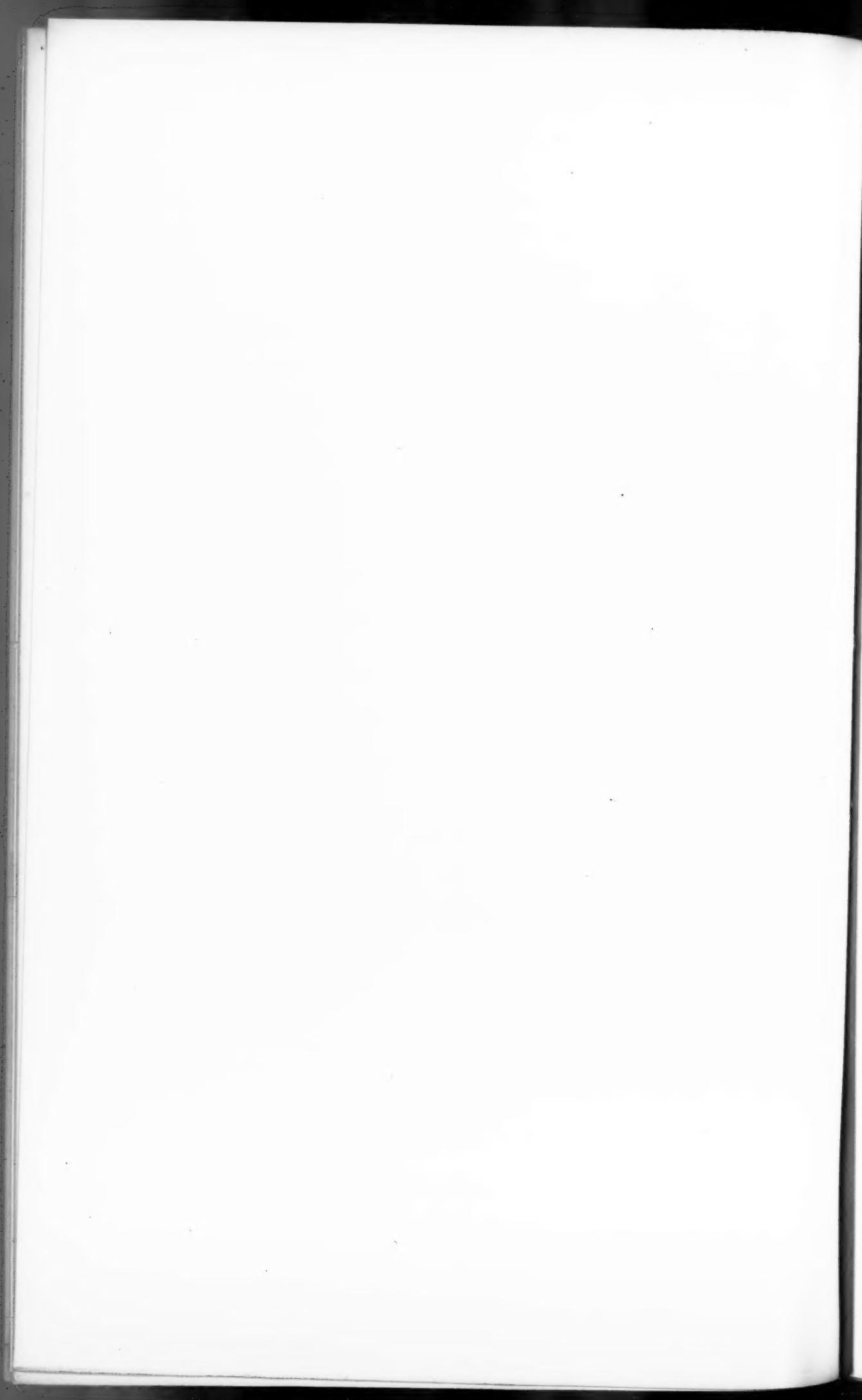
"Trees carved by Aborigines near Dubbo, N.S.W."

"Trunk of tree carved by Aborigines near Dubbo, N.S.W. This carving is possibly intended to commemorate some circumstance connected with the Boomerang."

"Trunk of tree carved by Aborigines near Guntewong, N.S.W. Placed to mark the grave of a 'Doctor' or 'Medicine Man' at 'Derwent'

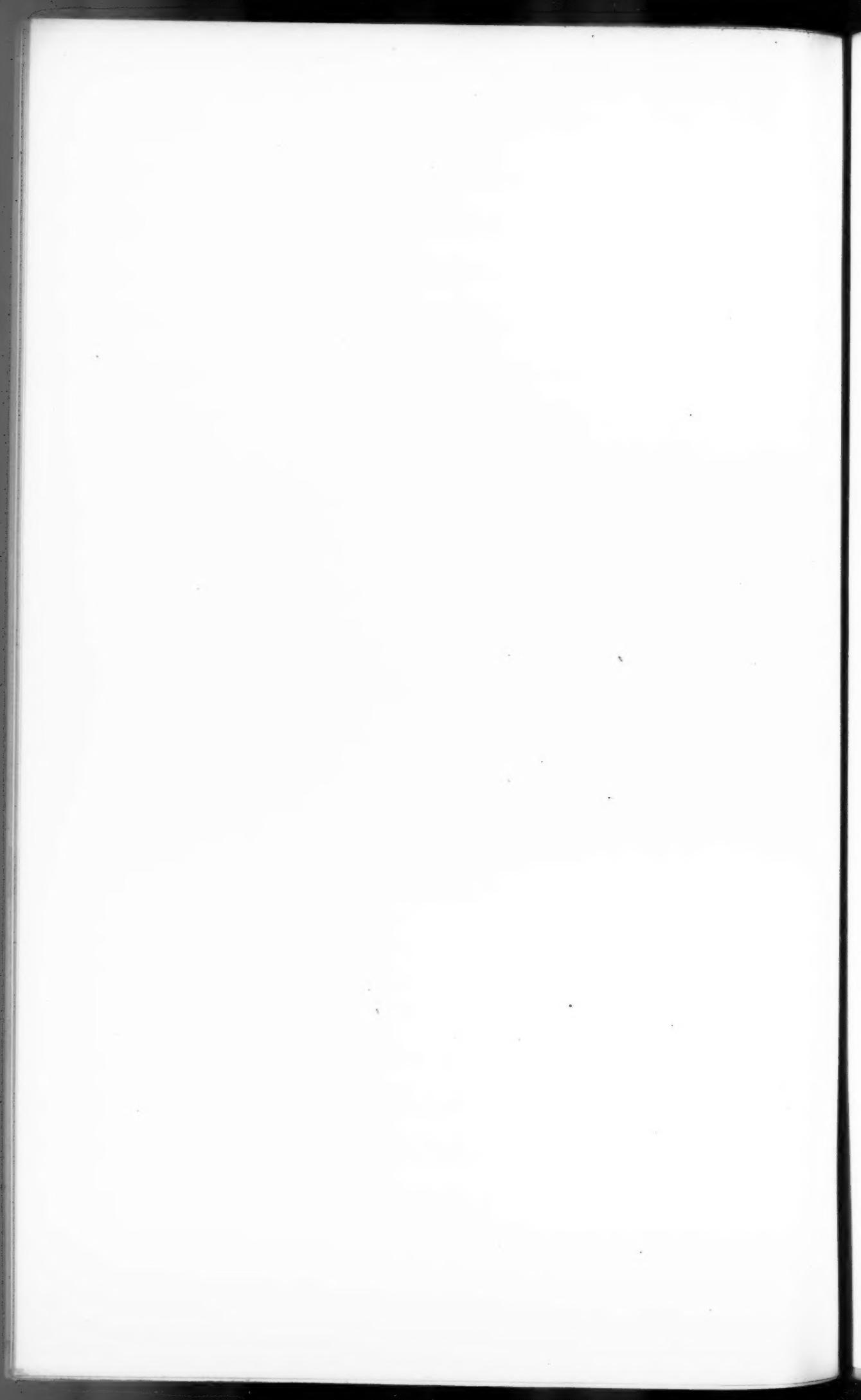


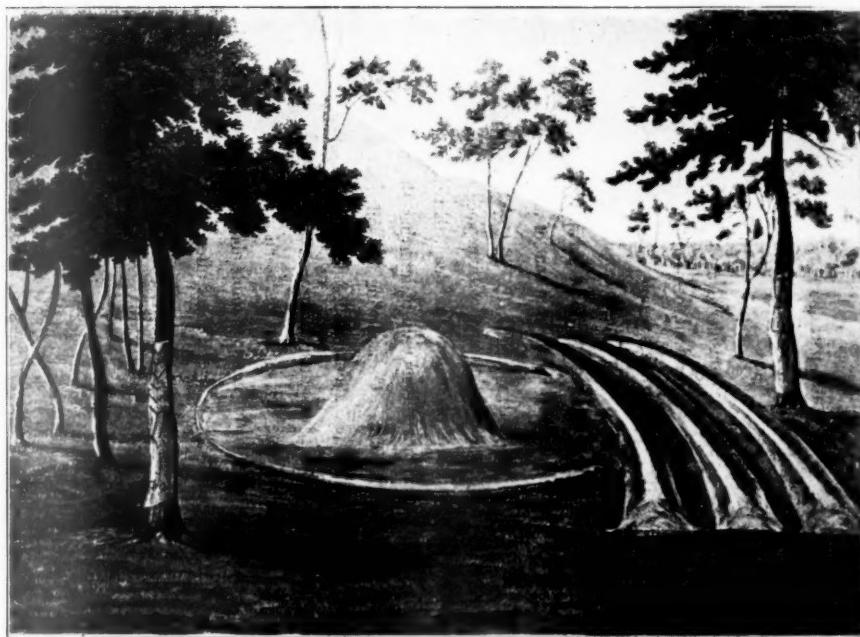
TREE CARVINGS, NEW SOUTH WALES.





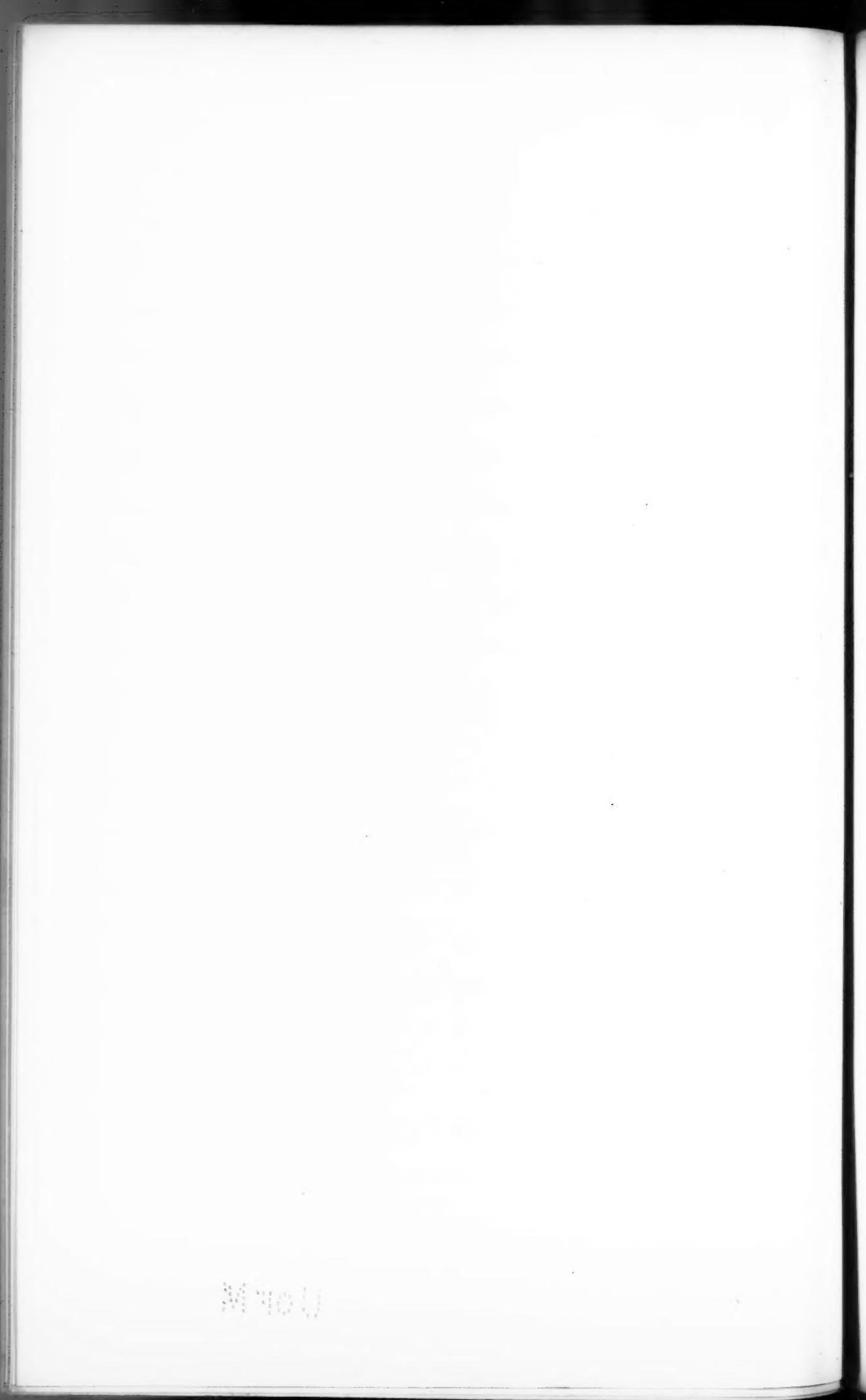
TREE CARVINGS, NEW SOUTH WALES.





THE GRAVE OF A NATIVE OF AUSTRALIA.

(From Oxley's *Expeditions*, p. 139.)



'Park' near Gunnedah. In the upper half is delineated the 'Cobra' or head of the deceased and in the lower his distinguishing scarifications."

"This information obtained by Mr. Henry Powell, the local 'Forest Ranger.'"

"Trunk of tree carved by Aborigines at Narramine, N.S.W. Placed to mark the grave of a head-man of the 'Macquarie Tribe,' who was a noted 'Boomerang' thrower, and killed in a tribal fight with the 'Bogan Blacks.' The carvings are possibly intended for Boomerangs to commemorate this."

So much for the description of these remarkable carvings. As to whether there may be any further meaning in them beyond that of the somewhat vague legends and surmises given above is, I think, a matter for legitimate speculation. It occurred to me that the carvings might have some connection with the "Bora rites."

What are commonly known as "Bora Grounds," the places where the "Bora" rites or rites of initiation of youths into manhood are carried out, were invariably ornamented by certain designs, generally traced in deep furrows in the ground, and even in some exceptional cases where there was a smooth rock surface cut into the rock. These designs are most remarkably similar to some of the carvings. I have come across several of these "Bora Grounds" in the course of my wanderings in the Australian bush during the last forty-one years, and can therefore speak of them from personal experience.

I would therefore venture the suggestion that some of these carvings may have been executed on the trees to mark the sites of certain particular "Bora Grounds," or even perhaps in some cases to mark the place of, and to commemorate the initiation of, some individual celebrated afterwards among the tribes.

The fact of not finding any tracings or designs on the ground near the trees is easily explained, as if not purposely obliterated, they would quickly become so through the action of the weather.

Note.—Mr. Perkins enclosed with his paper photographs of all the specimens in the Museum, but it was found impossible to reproduce them all, more especially as the greater number are published in the *Ethnographical Album of the Pacific Islands*, 3rd Series. A plate from Oxley's *Expeditions into the interior of New South Wales*, p. 139, is inserted in order to show similar carvings on trees standing near to the grave of a native.—EDITOR J.A.I.

DIALECT CHANGES IN THE POLYNESIAN LANGUAGES.

BY REV. SAMUEL ELLA.

PASSING through many channels, and intermingling with other tongues, which either already existed among earlier aborigines of the islands, or were introduced by subsequent immigrations, the Polynesian languages or dialects have undergone considerable changes.

In tracing these changes we find that a peculiar phonetic has been adopted, perhaps at first by a few only, and not by the entire people, but in course of time the peculiarity has become general and national, and thus created a new dialect diverse from the original. This process is now taking place in Samoa. Most of the natives of the eastern island, Tutuila, substituted *k* for *t*. Of late years some of the young people of Upolu affected the same pronunciation, and this pernicious fashion is being generally followed. Not only so, but they are changing *g=ng* for *n*; thus, instead of saying *tangata* they say *kanaka*, and so forth, bringing the Samoan dialect to nearly resemble the Hawaiian. In some instances they also reject the Samoan break, or catch, and introduce *k* in its place. Probably the latter was originally the common mode of pronunciation, but was softened by the Samoans.

A vocal impediment in an individual may spread to the family, through affecting the pronunciation, and being still further simulated by others, in the process of time become general. I once met with a Samoan chief in the east of Upolu who changed both *f* and *t* to *k*. His parting adieu struck me as very eccentric; instead of the usual "*Tofā, outou faifeau!*" (Good-bye, missionaries), he said, "*Kokā, oukou kaikeau.*" His utterance sounded very guttural and objectionable to Samoan ears, and was not likely to be imitated.

Another cause of alterations in words of the common colloquial arises from a peculiar *tabu* prevailing in some of the groups, as the Marquesas and Society Islands. A high chief would select for his name or that of his son (heir apparent), the name of a familiar article, or a quality, or action. In such a case the common word is tabued, and must no longer be used in its ordinary sense, and it is replaced by another, coined for the occasion. For example, the king of Tahiti being much troubled at night by a cough assumed the name of *Po-mare* (night-cough). Immediately *po* (night) was dropped from common use, and *rui* accepted in its place, and *mare* was changed to *kare*. *Rui* is formed from *uri* (dark or darkness) by a simple transposition of letters. This peculiar custom is called

"tepi" by the Tahitians. One of the old missionaries mentions upwards of forty words so changed in his time.

All Polynesian dialects have a profusion of obsolete words, more or less numerous, which were once in ordinary use in their colloquial, as evidenced by words found in their ancient songs and myths. The old orators among the people, are proud to employ them in their public councils, but they are never heard on other occasions. Some words that have passed out of use in one dialect may be found in the ordinary colloquial of another.

In reviewing the Eastern Polynesian dialects I shall make a few brief remarks on each, and show how far they correspond and in what they differ. The illustrations contained in the Comparative Vocabulary (see the Appendix), will perhaps help to elucidate what is said on the subject. In this vocabulary I have selected a few words of common use. Although a more extended vocabulary would be found very serviceable to philologists, it did not seem desirable to occupy more space in the present paper, or enlarge on the topics treated in this cursory review. A volume might (and may at sometime) be prepared on this subject, and prove very acceptable and helpful to many. I take the Samoan as a basis, and as the most refined and complete in grammatical construction; and it will be seen that there is a perfection in this dialect, both in its phonesis and structure, not so clearly visible in the other Polynesian dialects. It will not be necessary here to add the language of courtesy or deference, called "Chiefs' Language," always employed in speaking to, or of, chiefs, which comprises a considerable change in many nouns and verbs, and in some instances varies in accordance with the status of the chief addressed or referred to.¹

The SAMOAN alphabet consists of fourteen letters only, comprising the five vowels—*a, e, i, o, u*, and nine consonants—*f, g, =ng, l, m, n, p, s, t, v*. The vowels are pronounced as in French, Italian, etc.; *u* as *oo* in "root." The consonants seldom vary from the ordinary English sound, though *l* occasionally is pronounced as a soft *r*; *g* is a slight nasal as *ng* in "king," not so strong a nasal as *n* in "French." In most of the Polynesian dialects it is represented by *ng*. *S* is mostly a soft sibilant. It is absent from the other dialects excepting Rotuman. In some islands, containing mixed races of Samoans and Tongans, *t* is often pronounced as *ts* or *tz*. In other lands, *t* is changed to *d* or *k*, and *s* to *h*.

The vowels are variously accentuated; they may be short or long, broad and open, or acute. As a general rule, special care is used in a distinct enunciation of the vowel sounds, for words containing the same letters differ widely in meaning according to the accentuation of the vowels; *e.g., mama* may mean a ring, or clean, or light, or shame, according as it is pronounced.

H and *k*, freely used in other Polynesian dialects, have been elided from the Samoan,² and replaced by a break or catch. This is represented in its written

¹ This language of deference exists in Java, and is there called *bhasa-krama*.

² Of late years *k* has been substituted for *t*.

form by an inverted comma (‘). In books printed for native use, this sign is omitted except in words which might be mistaken from its omission.

In the many different dialects of Polynesia the vowels are for the most part retained throughout, and remain intact in corresponding words of each dialect, but it is very different with respect to the consonants, for these have undergone changes in the several groups of islands. The *Maoris* have made the most numerous alterations. They also largely interchange vowels in their own vocables; *d* readily interchanges with *t*, and often the sound is so indistinct that it is difficult for an unpractised ear to discern which is used. *F* is omitted and replaced by *w*, *wh*, *v*, *n*, and *p*; *l* is represented by *r*; and *s* is altered to *h* and *v*; and *k* is used where Samoans employ *t*, and *w* for *v* generally. Maoris in their peculiar phonetic give *wh* for *f*, generally at the beginning of words, as *whare* for *fale*, *fare*, etc.¹

In a few cases in each dialect vowels are interchanged, perhaps as the result of careless speaking; for, as a general rule, Polynesians pay special attention both to the placement and exact pronunciation of vowels. Maoris are less strict, for they have a number of words in which the vowels are frequently altered, and similar interchange is made also with consonants. These divergencies are somewhat disconcerting and perplexing in trying to form a comparative vocabulary. Take, for instance, the general word for a fly, *lango*, or *rango*; Maoris call it both *rango* and *ngaro*. Now, *ngalo* in Samoan, etc., means "to forget."

Many changes of consonants distinguish the several dialects of Eastern Polynesia, often marking the difference of tongues. Samoans have softened the Polynesian language in every possible way, and have rejected all harsh sounds, gutturals, and aspirates. They admit no conjunction of consonants, and reject *h*, *k*, and *r*. For *h* they substitute *s* or *f*, and *t* for *k*. Instead of *r* they use the liquid *l*, and *w* is wanting, *v* always supplies its place.

The TAHITIAN language in some respects resembles the Samoan in regard to softness and easy articulation. In it *k* is elided, but *h* is retained, and employed where Samoans use *f* or *s*, and occasionally in place of *m*. The nasal *g=ng* is omitted, sometimes *n* is used instead. The letter *r* is profusely employed, but often softened. In some words in which *p* is used by Samoans, Tahitians substitute *n* for *p*, and frequently elide the *n* and *g* of Samoa, evidently preferring the hiatus caused by two similar vowels coming together through the elision of these consonants. *T*, *h*, and *r*, often take the place of *l* of Samoan; *m* is omitted in some words, and the vowel only expressed; and in other words *n* is used instead of *m*; *v* is sometimes employed in place of *f*.

The literal form of words in MARQUESAN, PAUMOTUAN, MANGAREVAN differs very slightly from the Tahitian, though perceptible changes have been made both in the orthography and meaning of words. *H* and *k* are freely employed, generally in place of *f* and *s* of Samoan. In the two former tongues *f* and *h* interchange

¹ In the early translation of the Scriptures, etc., the translators contented themselves by using *w* only, omitting the *h*; but this evidently was a mistake and often misleading; the plan, therefore, has not been followed by later writers.

where *f* only is used in Samoan. Paumotuan and Mangarevan retain the nasal *g=ng*, but in Marquesan *k* is substituted. Both *l* and *r* are omitted in Marquesan, often causing an awkward hiatus, like that which frequently occurs in Tahitian. A peculiarity in these three tongues is the frequent substitution of *e* for *a*; *a* is the most frequently used vowel in the other Polynesian dialects. Some variations seem to be of an arbitrary character, not governed by any fixed rule, but what Samoans would term a *nanu*, an affected pronunciation. As previously stated, many words are found in these three groups of a foreign origin.

HAWAIIAN orthography corresponds in some degree both with Tahitian and Samoan. Agreement with the latter is pretty general, yet with several deviations. There is a difference in some of the vowels, and frequent transpositions. As regards the consonants, *g=ng* is omitted and *n* is used instead; *h* and *k* take the place of *f* in Samoan, which is lacking; *k* is freely used, mostly as a substitute for *t*, which is also wanting except in introduced words; *l* is occasionally employed, but more frequently; *r* takes its place; and *v* is changed to *w*, which also in some words supplies the place of *m*.¹

The MORIORIS of the Chatham Islands are considered to be a remnant of the autochthones not only of those islands, but also of the early inhabitants of New Zealand. The language now spoken differs slightly from Maori. Many vowels are interchanged in several words, and others are ejected, *t* is often pronounced as *tch* as among some tribes of Tongan admixture.

RAROTONGAN closely corresponds with Maori. There are occasional interchanges of vowels, chiefly with *a* and *e*. Rarotongans reject the aspirate, but have not substituted the sibilant as in Samoan; *f* also has been elided, which mutilates words of general use in Polynesia, and it is not replaced as in Maori by *w* and *wh*; *k* is extensively used, and *l* is changed to *r*, which is the case in several Polynesian dialects. There are diverse provincialisms in the Rarotongan-speaking tribes, chiefly among the natives of the coral islands to the north and west of the Hervey Group.

TONGA, though a neighbouring group to Samoa, has a phonetic differing materially from the Samoan, occasioned by the frequent use of *j* and *k*, and the substitution of *b* for *p*; in some words by the re-duplication of vowels, and the frequent interchange of *o* and *a*. *H* takes the place of *s*, and *j* that of *t*. In some tribes *t* is changed to *ts*, *tz*, or *tch*.

NIUÉAN is an admixture of Samoan and Tongan elements. The same is the case with TOKELAUAN; in the former the Tongan predominates, but the Samoan in the latter.

FIJI, the geographical position of which is on the dividing line between Western and Eastern Polynesia, and between the Melanesian and the Malayo-Polynesian regions, has a language composed of mixed tongues of these races. There are dialectic differences in the several islands of the group; but

¹ The Hawaiian alphabet is the shortest of Polynesian, having only 13 letters.

the vernacular of Mbau, the former seat of royalty, approximates nearest to the Samoan, though it is evident that Melanesian peculiarities largely prevail, and also that many words have been adopted from Tonga, with which place Fiji has ever been in close communication. The Fijian orthography possesses *b*, *c*=soft *th*, *d* (often used in place of *t*), a hard *g*, *q*=*ngg*, *v*, *w*, and *y*. *F* is wanting, and substituted by *v*; *r* often supplies the place of *l*, and *w* (as in Maori, etc.), that of *v*; *n* at times instead of *l*. Combined consonants are used, mostly as labials or nasal breathings. These sounds are represented by *mb*, *dr*, *nd*, *nt*, and *c* for *th*. In modern literature, *th* is put for the last mentioned, and *m* is omitted from the *mb* of older orthography.

The ROTUMAN language, like the Fijian, is a compound of several Polynesian dialects, with additions from Melanesian tongues, chiefly from the Caroline and Gilbert Islands; and, in accordance with the usage of Melanesians, final vowels of Polynesian words are often eliminated, and combined consonants are freely employed. The letter *h* is used in place of *f* in words derived from Samoa. Samoan words are much mutilated in Rotuman. The sibilant is retained.

The *Syllables* of Polynesian words are very simple and of easy pronunciation, being composed of a consonant followed by one or two vowels, or formed by vowels only. There are no proper diphthongs, with a few exceptions each vowel is distinctly sounded. When two similar vowels come together there is a slight break or hiatus between. In some cases, particularly in compounded words, two similar vowels falling together are pronounced as a long vowel. Every syllable ends with a vowel. Only in Maori, Fijian, Tongan, and Rotuman, consonants are conjoined. This construction of syllables is general in all the cognate dialects, excepting the tongues of mixed Polynesian and Melanesian origin, where the respective dialects intermingle or are modified by one another.

Root words are mostly dissyllabic, often simply monosyllables. Polynesian, like the German, abounds in compound words, in the construction of which the native tongues have remarkable facility. Polysyllabic words are generally composed of such compound words—an evidence of the simplicity and primitive character of the language. The radicals are mainly nouns or verbs, chiefly the latter. In Samoan, a verb may be converted into a noun by annexing *ga* (*nga*) to it; *e.g.*, *moe*, to sleep; *moega*, a bed, or sleeping-place. This is the case in many of the eastern islands, as New Zealand and Rarotonga. In Malayan *an* is affixed in forming verbal nouns.

As regards pronunciation, as a general rule the accent is on the penultima; and, in accordance with this rule, when a word is prolonged by the addition of an inflexion, the accent is shifted forward; *e.g.*, *alófa*, love; *alofagía*, beloved. This does not apply to words ending in a long vowel; then the accent is on the ultima; also in speaking of a place or thing at a distance (the demonstrative *na* or *la* is added or understood), as, *i faté*; or *i Tutuila*, also in mentioning a family name or tribe, as *Sā Tu'i-A'anā*, or in describing abundance, as *niu*, cocoanut, *e niuá*, abounding in cocoanuts.

Polynesian is an agglutinate language; inflections are omitted, and their place is supplied by particles prefixed or suffixed. Melanesian and Micronesian tongues are to some extent inflexional. A language of courtesy or deference, so extensively used in Samoa, is employed partially, as an incorporation from Samoa, in some of the other islands, as Rotuma, Tonga, etc.

These Polynesian tongues have a clear, systematic and grammatical form; and an ignorant or clumsy speaker would hardly be tolerated. A synopsis of the grammar will be useful, noticing briefly the several dialectical differences. I have studiously examined these divergencies but can add only the most striking without trespassing on space. A full treatment of the subject would fill a volume. Taking the Samoan as a basis, I shall denote the other dialects by their respective initials, viz., S. Samoan, N. for Niuean, To. Tongan, F. Fijian, H. Hawaiian, M. Marquesan, Ta. Tahitian, P. Paumotuan, Man. Mangarevan, R. Rarotongan, Mao. Maori, Ro. Rotuman, Tok. Tokelauan, N.G. New Guinea. As the Maori and Rarotongan are much alike, and as a close affinity exists between Tahitian, Marquesan, Paumotuan, and Mangarevan, also in Tongan and Niuean, and between Samoan and Tokelauan, what is said of the one will generally apply to the other correlative.

The ARTICLE.—The Samoan definite article is '*o le*, singular; in the plural *le* is omitted, '*o* alone is employed, and the same is used before proper names; e.g., '*o le tagata*, the man, '*o tagata*, men; '*o Malietoa*, '*o Savai'i'. *Se* is an indefinite and partitive article (sing.), *ni, isi*, (pl.); *si, sina, nisi*, etc., are also partitives. The plural is mostly denoted by the omission of the article, except in the use of these last-mentioned partitives.*

N., *he* (sing.), *e, tau*, (pl.); To., *koe, he, ha, a* (sing.), *a, e, ngahi* (pl.), *ka* (indefinite); F., *na, a*; H., *he* (sing.), *na* (pl.), *ka, he* (indefinite); M., Ta., Man., *te* (sing.), *e* (pl.); P., *ta* (sing.), *a* (pl.); R., *te* (sing.), *e, au* (pl.); Mao., *he, te* (sing.), *ko, ka, nga* (pl.), *e, hina* (indefinite); Ro., *se* (sing.), *na* (affix pl.); N.G., wanting.

NOUNS lack proper declensions; particles mark the number, words for "male" or "female" the gender, the neuter is not noted, and prepositions denote case. Prefixed particles, *au, tau, to'a* are often used to point out numbers. Many nouns are derived from verbs by affixing *nga, anga, manga, sanga*, or *tanga* to the verbal root, mostly the first-mentioned. Many peculiar forms of verbal nouns might be quoted, but they would be of little service as regards comparison of the dialects. Similar changes of verbs to nouns belong also to some of the other dialects, as Rarotongan, Maori, etc. A peculiar method exists in Hawaiian for denoting plurality, such as prefixing the particle *na* to signify a large number, *pae* and *puu* of objects previously mentioned, and *poe* in a restrictive sense. In Motuan of New Guinea, number is generally absent, sometimes expressed by a change in the genitive particle, or by re-duplication to form the plural.

Case in Samoan is indicated by prepositions prefixed. *Nominative* by '*o* broad. In To., N., F., and Mao., *ko*; H., M., Ta., '*o* (as in Samoan), *no*; (pl.) F. and R.,

¹ Also in H., T., M., R., and sometimes in To., Man., Ta., F. and Mao., Ro.

etc., *ō*; N.G., expressed by being placed first in a sentence before the predicate. The *Genitive* in Samoan has *o* soft or *a*. No special rule can be given which should be used, though certain nouns take the form of *o*, others of *a*; *o* is the more general, and yet awkward mistakes might be made by using *o* where *a* should be placed. In the other cognate dialects the genitive form varies: N., *a*; To., *ki, ae, o*; F., *na, nei*; H., M., Ta., P., *na, no*; R., Mao., *na, no, ta, to, a, o*; Ro., *on, ne*; N.G., *na, dia*, or *ena* (his) suffixed. The Samoan *Dative* is: *i, ia, iate* (personal), *to*; *mo* and *ma*, for; N., To., F., H., R., and Mao., *ki*, with variations, as To., *ke, he*; N., *kia*, etc.; R., *i*; Mao., *ko*; Ro., *ko*; N.G., placed at the end of a sentence. The *Accusative* form much resembles the dative, or by omitting the particle. In N.G., it follows the nominative but precedes the predicate. The *Ablative* in Samoan is formed by the addition of *ai, e, mai, nai* (from), *i* (into), *e* (by). In other dialects a similar form is employed, as N., *ki, tahe, mai*; To., *ae, e, i, ki, ita*; F., *e, vei*; H., M., Ta., *e, i, ma*; R., *e, ki, ma*; Mao., *e, i, ma, na*; Ro., *se, mai*; N.G., *laia* (suffix) from; *e, amo*, by, etc. The vocative in Samoa takes *ē* as an affix particle. In To., H., Mao., and Ro. the particle is prefixed, and in Ta. and P. it is placed either as a prefix or suffix; N. is *nae* (affix), and Ro., *ko* (prefix), N.G., *e, o* (suffix), sometimes as a prefix.

ADJECTIVES, as a general rule, follow the noun, as *le tangata lelei*, a good man, except in cases where a verbal significance is given to the adjective, as, *E lelei le tangata*, The man is good. Adjectives are either primitive or formed from nouns and verbs, as *lelei*, good; *'el'e'elea*, dirty, from *'el'e'ele*, dirt; *fa'alongo*, obedient, from *fa'alonga*, to hear; or by a re-duplication of the noun, as *fatufatua*, stony, from *fatu*, a stone; *apulupulu*, sticky, from *apulu*, to stick. Many adjectives are formed by prefixing the causative particle *fa'a* to some nouns, verbs, and other adjectives. A list of some adjectives of common use will be found in the Appendix. In Motu, N.G., nouns, verbs, and adverbs are used as adjectives, and known by their position in a sentence. Adjectives are also formed from verbs by suffixing *ka*.

DEGREES OF COMPARISON are expressed in Samoan by words implying contrast, as, *E lelei lenei, e leanga lena*, this is good, that is bad; *i.e.* this is better than that; and *e sili ona lelei*, best. The superlative is formed by adding certain adverbs or adjectives, as *sili*, superior, *silisili ese*, supreme; also *a'ia'i, matuā, nauā*, etc. This form prevails generally throughout the Polynesian dialects. Tongans express the superlative by affixing *aubito*. In Hawaiian comparison is expressed by adding another adjective or an adverb, and the superlative is formed by prefixing the article *ke*. In Rotuman *pau* signifies superlative. In Motu, New Guinea, comparison is made as in Samoan, the superlative by adding, *herea*, exceedingly. In Samoa the particle *e* is the usual prefix to adjectives and numerals; sometimes the verbal particles *ua, na, sa* are used when the adjective takes a verbal form. Of the other dialects—N., To., and F., *e*; H., *e, he*; Ta., *e*; R., *e*; Mao., *a*; Ro., *se*.

A list of units of the several dialects is given at the close of the Appendix. The greatest similarity in the various dialects will be found in their numerals and

pronouns. Certain things have their own peculiar particles and adjuncts,—space will not admit of these being specified,—persons generally by the prefix *to'a* in Samoan, as *to'asefulu*, ten persons; N., To., M., R., and Mao., *toko*; H., *koo*; Ta., *too*; N.G., *ra*, *ta*, *ha*, *la*.

PRONOUNS.—The several dialects have a dual as well as a plural number, and a variation to denote the inclusion or exclusion of the persons addressed. The dual is formed by the affix *ua* (from *lua*, two); the plural by the affix *tou* (from *tolu*, three). The first person dual and plural is denoted by a prefix *ta* (inclusive) and *ma* (exclusive). The second person by the prefix *ou*, and the third by *la*. See Appendix.

Case is denoted by the use of particles, similar to those used in the declension of nouns, and they are also marked by an additional particle *te* used before verbs in the future, or with oblique cases of pronouns. It has no other quality than that of euphony. The pronoun properly precedes the verb, though in some instances it may follow the predicate, as, *Na fai mai o ia*, or, *Ua faapea mai o ia*, He said; lit. Said he. Samoans have a peculiar change in the 1st pers. sing. *ta*; dative and accus. *ita* (or nom. when used after the predicate), or as a re-duplicate for emphasis, as in the familiar phrase, *Tāilo lava ita*, As for me, I don't know. The Samoan *nominative* is formed by the prefix '*o*'; N., To., F., *ko*; H., *o*, *a*; Ta., *o*; R., *ko*, *a*, *o*, *oki*; Mao., *a*; Ro., *ka*, *ko*; N.G., wanting. The *Genitive*: S., *o*¹ and *a*; N., To., *he*, *ha*; F., *ni*; H., *ko*, *ka*; Ta., *na*, *no*, *a*, *o*; R., *na*, *no*, *ta*, *to*; Mao., *ta*, *a*, *no*; Ro., *ne*, *on*. The *Dative*: S., *id*, or *ia te*; N., *kia*; To., *ke*, *ki*, *ku*, *kiate*, *iate*²; F., *rei*; H., *no*, *na*, *i*; Ta., *ia*; R., *kia*; Mao., *ka*; Ro., *se*. The *Accusative* in Samoan is generally formed by the particles *ia te*, or they are omitted; N., To., *kia*; F., *ko*; H., *ki*, *i*; Ta., R., *ia*; Mao., *ki*; Ro., *sa*, *se*. The *Ablative*: S., *e*, by; *mo*, *ma*, for; *mai*, *nai*, from—which take a second preposition as, *mai ia te ia*, from him; N., *a*, *e*; To., *e*, *i*, *kia*, *moo*; F., *ko*; H., *e*, *me*, *mai*; T., *i*, *mai*; R., *ki*, *ko*, *a*, *i*, *ei*; Mao., *ki*, *no*, *o*, *a*; Ro., *e*, *i*. The Samoan *Vocative* is *e* affixed; N., To., *nae*; F., *i* (prefix); H., *e* (prefix); T., R., Mao., *e* (prefix or affix); Ro., *ko* (prefix). Motu, New Guinea, pronouns have person and number, but no case.

Possessive Pronouns in Samoan are distinguished by the adjunct of the article *le* (or *l* only) in the singular of the 1st person, and changed to *lo* and *la* in the 2nd and 3rd person. In the plural the article is omitted.³ My, mine: S., *lo'u*, *la'u*; N., *hau*; To., *haku*; F., *qu*, *qo* (affix); H., *ko'u*, *ka'u*, *na'u*, *no'u*; Ta., *to'u*; R., *taku*, *toku*; Mao., *naku*, *nakaku*, *moku*, *oku*; Ro., *oto*; N.G., *lauegu*. Thy, thine: S., *lou*, *lau*; N., *hau*; To., *to*, *te*, *ho*; F., *mu* (affix); H., *ko*, *kou*; Ta., *to*; R., *naau*, *taau*, *toou*; Mao., *tau*, *tahau*, *taku*, *tou*, *tohou*, *nou*; Ro., *ou*; N.G., *oiemu*. His: S., *lona*,

¹ This is a soft *o*, and not like the '*o*' of the nom. which has an aspirate or catch.

² Tongans often abbreviate the pronoun in the genitive and dative; as *he e mau* for *he mautolu*; *kinautolu* for *kiate lautolu*. The abridgments are *mau*, *nau*, *ndua*. Samoans shorten the 2nd pers. pl. nom. to *tou* for *outou*.

³ *Na* is sometimes used as a personal pronoun in the nom. of the 3rd pers. sing., as *Ua na fai mai*, he said or says; but it is the general form of the 3rd pers. sing. as an affix to the possessive, *lona* or *lana*. When a plurality of things is indicated the *l* (as in the article) is elided, as *lona fale*, his house; *ona fale*, his houses; *lana mea*, his thing; *ana mea*, his things.

lana; N., *hona, hana*; To., *hono*; F., *na* (affix); H., *kana, nona*; Ta., *nona, tona, tana*; R., *tona, nona, tana, nana*; M., *tona, nona, tana, nana, nahana*; Ro., *on*; N.G., *iена*. Our: noted by prefix particles to the personal pronoun; S., *lo, lu*, as *lo tatou*; N., To., *ha, ko*; F., *keimami* (affix); H., *ka*; Ta., *ta*; R. and Mao., *ta, to*; Ro., *oto*; N.G., *ai emai* (exclusive), *ita eda* (inclusive). Your: S., *lo, la*; N., *ha*; To., *to, te, ha*; F., *nomudou*; H., *ka, ko, na, no*; Ta., R., Mao., *ta, to, a, o*; Ro., *omus*; N.G., *emui, umui*. Their: S., *la, lo*; N., *ha, ho*; To., *ho*; F., *nodra*; H., *ka, ko*; Ta., *ta, to*; R., *na, no, ta, to*; Mao., *ta, to*; Ro., *ou*; N.G., *idia, edia*.¹

The Samoan *Demonstrative Pronoun* is represented by *lenei*, this; *lca, lelā*, or *lenā*, that, sing.; and plural *ia* or *nei*, these; *na* or *la*, those. *Sea, sisi*, and *sinei*, are used in a familiar or diminutive sense. So in N., *a enei*, this; *a ena*, that; To., *ko enei, henī*, this; *eni, ni*, these; *hena teu*, that; F., *o qo*, this; *na*, that; H., *eia*, this; *la, leila*, that; *kena* (personal); Ta., *teie, teicnei*, this; *tena, tenana*, that; R., *nei, teia, teianei*, this; *tena, tera, reira, teina, na, tenana*, that; Mao., *tenei, nei*, this; *tena, tera*, that; *ena, era*, those; Ro., *teisi, sini*, this; *teii*, those; *ta*, that; N.G., *ina, ini*, this; *ena*, that (near); *una,unu*, that (distant).

In Samoan the *Relative Pronouns* are often omitted, but understood; they are, *o ai*, who; *'o le*, who or that, sing.; the plural is expressed by dropping the *l*; *ai* is also used as a relative reflective. N., *koe*; To., *oku*, who; *teu*, that, *ai* (reflective); F., *ko, koya*; H., *wai*; Ta., *vai*; R., *ko tei*; *ki tie*; Mao., *wai, nana*; Ro., *ka sei, ta*; N.G., *enai, unai*.

Indefinite Pronouns are: S., *ni*, some, any; *nisi, isi*, some others; *nai*, some few; N., *falu*; To., *niihi*; F., *so*; H., *kekahi*; Ta., *tetahi*; R., *tetai*; Mao., *ketahi, hinu, tokohinu*; Ro., *vil*; N.G., *haida, taina, idia ta*.

Interrogative Pronouns: S., *'o ai?* who? ² *Ole ā?* what? (sing.); the plural drops the article *le*; *Se ā?* what? (indef., sing.); *ni ā?* (plural); *le fea?* *se fea?* which? Who?: N., *ko e, na a?* To., *ko hai, koai?* *na a?* *na ha?* F., *o thei, ko?* H., *ko wai?* Ta., *ovai?* *kovai?* *na rai?* R., *koai?* Mao., *ko wai?* Ro., *ka sei?* N.G., *daika?* *daidia?* What?: N., *ke he?* *po ke heingoa?* (emphatic); To., *eha?* *oha?* *koecha?* F., *thava?* *ne?* H., *aha?* *hea?* Ta., *aha?* *eha?* *nei?* R., *eaa?* Mao., *aha, ne?* Ro., *ka tes?* *ka tea?* N.G., *dahaka?* Which?: N., To., *koe . . . fe?* F., *a thava?* H., *hea?* Ta., *tehea?* R., *teea?* Mao., *tehea?* Ro., *ka sei?* *ka tei?* N.G., *edana?*³

Verbs in Polynesian would be more clearly defined by Oriental conjugations than by European. *Number* is often denoted by a re-duplication of the verb or a syllable. The plural form is used with nouns of multitude. Verbs generally

¹ The following terminal particles also express the genitive of nouns of relationship; and this accords with similar forms in many Melanesian dialects:—

Fijian, 1st pers. sing., *qu, qo*; 2nd, *mu*; 3rd, *na*.

New Guinea, „ „ *gu*; „ „ *mu*; „ „ *na*.

„ plu., *mai* (inclus.); „ „ *mui*; „ „ *dia*.
 „ „ *da* (inclus.).

² In asking the name of a person *'o ai* is used, as *'O ai lou ingoa?* Who is your name? The same form is employed in the other cognates.

³ An affix particle *ea* denotes interrogation generally.

agree with the nominative. If the objective is the main subject of the predicate, the verb must agree with it. The usual prefatory particle in Samoan is 'ua; N., kua; To., bea, kuo; F., ma; H., wa, ua; R., and Mao., na, kua; Ro., sa; N.G., none special. Tongans employ very freely the particle *bea* at the beginning of sentences, which is somewhat similar to Samoan *ona*, and may be rendered by "then." In New Zealand and Rarotonga *na* is often used to call attention at the commencement of a sentence; in Samoa it becomes *ia*, but not of frequent use except in public speaking. *Ona*, in Samoan, before the predicate, and followed by *ai lea* after the verb, properly expresses consequence or result. Tahitians affix an expletive *ra* to most verbs and nouns. This is followed to a limited extent in Rarotongan and Marquesan. In Hawai'i and the eastern islands of Samoa *ra* is changed to *la*.

Moods and Tenses are formed by the addition of particles, as prefixes or suffixes, which, although they for the most part possess no separate meaning, serve the purpose of distinguishing action and time. There are also directive particles which follow the verb and denote its application, as *mai*, towards, and *atu*, from the speaker; *ane*, directive along or aside; *a'e*, directive upward, and *ifo*, downward; *ese*, away from. These directive particles exist in the several dialects, with certain modifications; N., To., *mai, atu, hake, hifo*; H., *mai, aku, ae, a'e, iho*; Ta., *mai, atu, ae, ake*; R., *mai, atu, ana, a'e, ake, iho*; Mao., *mai, atu, ana, a'e* or *ake, iho*. In Motu, N.G., the suffixes are compounded with the verb: *dae, isi*, upward; *dobi*, downwards; *oho*, away; *ohu*, around.

VERBS are active, passive, or neuter, each expressed by its governing particle. Except by occupying considerable space their various forms and deviations cannot now be particularly specified. It may be sufficient to give the passive form of each dialect. Samoan *passive* particles or suffixes to the verb are *a, na, ina, ia, sia, tia*, with other changes of the consonant; N., *ai, nia*; To., *o* (prefix), *tia* (suffix); F., *tai*; H., *ia hia*; Ta., *ia, aia, hia, raa*; R., *ia, hia, tia, anga*; Mao., *ia, hia, tia*; Ro., *aki*; N.G., by adding the personal particle, as *gu*, 1st person sing., and so forth; sometimes *lia* or *tia*.

The Samoan *Infinitive* takes *e* before the verb, and this is the rule generally throughout Eastern Polynesia, excepting N., and To., *ke*; R., *o, ke, ite*; N.G., *ane*. The *Reciprocal* (as *Hithpael* in Hebrew) is formed by *fe* prefix and *a'i*, etc., suffix to the verb. Difference of action is represented by slight changes in the suffix, and the addition of a consonant to the affix *a'i* adds emphasis or intensity to the predicate. N., To., *fe . . . aki*; F., *rei*; H., (none); Ta., *ihō*; R., *uaorai*; Mao., (none); Ro., *hoi . . . iung*, etc.; N.G., *he . . . heheni*: The *Causative* (as *Hiphil* of Hebrew) is expressed by a prefix *fa'a* to the verb. It is also used with nouns, adjectives, and adverbs, giving them a verbal form of causation. *Fa'a* also changes intransitive to transitive verbs, as the prefix *ber* in Malayan. It has also other important significations, but is chiefly used to signify causation.¹ N., To., *faka*

¹ *Vide Pratt's Samoan Grammar and Dictionary.*

faa; F., *vaka*; H., *haa, hoo*; Ta., *faa, haa*; R., *aka*; Mao., *whaka, wha*; Ro., *aa, fa, fak*; N.G., *ha, ahe*. The Subjunctive is denoted by several particles prefixed, as *ina ia, ina ua, ona ua*; or *a, pe, pe afai, afai, a ne*; N., *kaeke, ane*; To., *kabau*; F., *kavaka*; H., *me, mehe*; Ta., *ahira, ahiri*; R., *me, naringa, angairi, i akono, mehe*; Mao., *me, me he, ki*; Ro., *kepoi*; N.G., *bema, baine*. The Potential, expressed by prefixes: S., *ma, mafai*; N., *ka*; To., *faa, kane*; F., *ko sa*; H., *ka*; Ta., *e ma*; R., *hei, me, penei*; Mao., *hei, me, ahei, penei*; Ro., *mo, rahia*. The Samoan Imperative has certain prefixes and affixes which express also attitude, as *ia, inā* (pref.) with *ia* (suff.), commanding; *auā*, forbidding; *se'i*, entreating; N., *a* (affix); To., *ke, tau*; F., *me, ia*; H., *e*; *mai* and *ole*, forbidding; Ta., *a, ia*; *mai* and *ore*, forbidding; R., *ka, kia*; Mao., *kia, hia*; *kore*, forbidding; Ro., *au, la*; N.G., *ba, a*.

Another peculiar form of the verb in Samoa is the Intensive (like *Piel* in Hebrew). It is expressed by a re-duplication of the verb. Continued action is denoted by prefixing *tau* or affixing *a'ina* to the verb. Other cognate dialects have this mood.

Tenses in Samoan have various modifications. It will not be necessary to notice the several special conditions, but simply to give what may be termed natural Tenses, or points of time. The Present Tense is expressed by the prefixes *ua, e*, and *o loo*. This last is mostly used as a participle. N., *kua*; To., *oku*; F., *a sa*; H., *ua, e, i, ana*; Ta., *e*; R., *e*; Mao., *e* (as a prefix or suffix); Ro., *e, ne*; N.G., *mu, mua* (affix). The Past Tense in Samoan is represented by *na* or *sa*; N., *ne, tuai* (emphatic); To., *na, nae, ne*; F., *ka, sa*; H., *a, na, nai, ia*; Ta., *ia, i*; R., *kua, ka, na, ne, no*; *i, ia* (suffix); Mao., *a, ka, na, no*; Ro., *na, voihia* (pref.) with *ung* (affix); N.G., *va* (affix). The Future in Samoan is marked by the prefix *e*; N., *ti, to*; To., *he, e*; F., *ena, sa*; H., *e, ku, ua*; Ta., *R., Mao., e*; Ro., *se*; N.G., *ba, baina, baine*, etc., to suit the pronoun. The Perfect Tense prefix is: S., *ua, ina ua*; N., *kua, tuai*; To., *kuo*; *a* (affix); F., *sa, sa qai*; H., *wa*; Ta., *ua, e*; R., *kua*; Mao., *kua*; Ro., *ne*; N.G., *vada* (prefix), *vaitana* (suffix).

In Samoan, and other cognates to a certain extent, a peculiar particle, *te*, is used for euphony between the pronoun and verb in present and future tenses.

I must now conclude this paper with comparing a few adverbs, prepositions, and conjunctions, viz.:—

ADVERBS.—Here: S., *unei*; N., *i hinei, hanei*; To., *i heni*; F., *kikei*; H., *ianei, nei*; Ta., *onei, o i nei*; R., *teia, tetai, nei, konei*; Mao., *konei, nei*; Ro., *teisi, mea*; N.G., *iniseni*. There: S., *i ita, inā*; N., *ki ai*; To., *ki ai*; F., *ki na*; H., *la, laila, aianei*; Ta., *reira, i tera*; R., *reira, tena*; Mao., *rerei, reira*; Ro., *e tau*; N.G., *unuseni*. Where: S., *'o fea, i fea*; N., *ko fe*; To., *fe, koeha*; F., *ni ea*; H., *te hea*; Ta., *i hea, teihea*; R., *teiea*; Mao., *kohea, kei hea, tea*; Ro., *sini, e tau*; N.G., *edeseni*. When: S., *afea* (present and future), *anafea* (past); N., *a fe*; To., *i he, fe, bea*; F., *ia ni*; H., *a, hea*; Ta., *i*; R., *kia*; Mao., *ahea, ano*; Ro., *avas*; N.G., *edana, negai*. Then: S., *ona* (prefix with *ai lea* affix); N., *ati*; To., *bea*; F., *ni, ni na, e na*; H., *laila*; Ta., *ati*; R., *ei reira*; Mao., *tanei, ati*; Ro., *kota*; N.G., *unai negana*. Yes: S., *e, ioe*; N., *e*; To., *io*; F., *io*; H., *oia, ae*; Ta., *oia, ae*; R.,

a, o, ae, koia; Mao., *ea, koia, ina, ana*¹; Ro., *o*; N.G., *io, oibi*. No: S., *leai, i'ai*; N., *nakai*; To., *ikai, ore*; F., *senga*; H., *ole*; Ta., *aita, ore*; R., *tikai, kare, kore*; Mao., *te, hore, kahore, kao, kanapa, kihai*; Ro., *eaki, ingke*; N.G., *lasi*.

PREPOSITIONS.—Of: S., *o, a*; N., *ha, he*; To., *a, o, i*; F., *ko*; H., *ka, ko, na, no, a, o*; Ta., *na, no, a, o*; R., *na, no, a, o*; Mao., *na, no, a, o, ki*; Ro., *ne, on*; From: S., *mai*; N., *mai*; To., *mei*; F., *mai*; H., *mai*; Ta., *o, e, mai*; R., *mai, mei*; Mao., *i, na, no*; Ro., *e*; N.G., *amo*. For: S., *mo, ma*; N., *ha*; To., *maa*; F., *na*; H., *me, na, no*; Ta., *i, na*; R., *na, no*; Mao., *ma, mo*; R., *ne*; N.G., *egu, agu, ema, emu*. With: S., *ma*; N., *mo*; To., *ka, i, mo, moe*; F., *vata*; H., *i, me*; Ta., *ma, mo, na, no*; R., *ki, i*; Mao., *me, ki*; Ro., *mai*; N.G., *ida*. In: S., *i*; N., *i*; To., *i, ki*; F., *e, mai*; H., *i*; Ta., *i, tei*; R., *i, ei*; Mao., *i*; Ro., *e*; N.G., *vareai*. To: S., *i, ia*; N., *ki*; To., *ki*; F., *ki*; H., *i, ki, na*; Ta., *i, ia*; R., *ki, i, ko*; Mao., *ki, ko*; Ro., *se*; N.G., *dekena*. Above: S., *i lunga*; N., *i lunga*; To., *olunga*; F., *maithake*; H., *luna*; Ta., *nia, nua*; R., *i runga, nunga*; Mao., *ki runga*; Ro., *rere*; N.G., *atai*. Below: S., *i lalo*; N., *i lalo*; To., *ki lalo*; F., *lako*; H., *lalo*; F., *lako*; Ta., *i raro*; R., *ki raro*; Mao., *ki raro*; Ro., *lopo*; N.G., *henu*. Behind: S., *i tua*; N., *i tua, mole*; To., *i, mui*; F., *sivi*; H., *i kua, muli*; Ta., *mamui*; R., *i muri*; Mao., *i tua, inonira*; Ro., *fauu*; N.G., *murina*. Before: S., *i luma*; N., *i mua*; To., *mua*; F., *kiliu*; H., *mua*; Ta., *mua*; R., *mua*; Mao., *i mua, keiwha*; Ro., *mua*; N.G., *vairanai*.

CONJUNCTIONS.—And: S., *ma*; N., *mo*; To., *mei, ma*²; F., *kei*; H., *ma, ame*; Ta., *o, ma*²; R., *e, ma, mei*; Mao., *he, me, ma*²; Ro., *ma*; N.G., *mai, bona*². But: S., *'a, faitai*; N., *ka*; To., *ka, kane*; F., *ia*; H., *a*; Ta., *area*; R., *kareka*; Mao., *he, a, ia, otira*; Ro., *mane*; N.G., *ā*. Also: S., *ma, fo'i*; N., *foki*; To., *foki*; F., *talega*; H., *hoi*; Ta., *hoi*; R., *oki*; Mao., *hoki*; Ro., *taapeima*; N.G., *dañu*. Although: S., *e ui ina*; N., *kacke, fano*; To., *ne ongo, kabou*; F., *kevaka*; Ta., *ia*; R., *e kia*; Mao., *ahakoa*; Ro., *mane*; N.G., *enabe*. Because: S., *auā*; N., *ha, nukua*; To., *koeahi*; F., *ni, ai*; H., *no ka mea*; Ta., *no te mea*; R., *no*; Mao., *heoi, no te mea*; Ro., *ne au*; N.G., *madi be*. Therefore: S., *'o le mea lea*; N., *ati, honei*; To., *koia*; F., *o koya*; Ta., *teie, nei*; R., *teianei*; Mao., *mo reira, koia*; Ro., *tapei*; N.G., *inai, badina binai*. If: S., *afai, ana* (past); N., *kacke, ane*; To., *kabou*; F., *kevaka*; Ta., *e, iā*; R., *e*; Mao., *me, kapatau, ki te mea*; Ro., *kepoi*; N.G., *bema* (past), *baine* (future).

It will be seen from the foregoing synopsis of a comparative grammar of the Polynesian languages that there is a close affinity and agreement between the several dialects of these people, spread over a very extensive portion of the Pacific. Diversities appear in many particulars, but no more numerous nor wider than are found in the provincialisms of European countries where civilisation and refinement abound. All point distinctly to a common origin. With the exception of New Guinea, Fiji, and Rotuma, I have not introduced any of the manifold

¹ *Koia* and *na* in Maori and Rarotongan also express approval, as '*o ia*, and '*o lea* in Samoan.

² Used chiefly in connecting numerals, pronouns, and proper names.

tongues of Western Polynesia. These may be superadded at some future time. Hence I refer to the languages treated as Polynesian, and not as Indo-nesian. Among the Melanesian and Micronesian languages will be found a large percentage of Polynesian words, more or less altered to suit the genius of these tongues abounding in consonants, double consonants, and gutturals. Like the Polynesian, they are affected by the phonesis and vocables of neighbouring islands. This is quite natural, and bears some comparison with the languages of Piedmont and the cantons of Switzerland, and other European countries.

In conclusion allow me to add my hope that this slight effort of mine will stimulate and help others to publish their knowledge and acquisitions, for the purpose of settling some useful comparisons, and to arrive at a more satisfactory conclusion. I have cautiously abstained from putting forth any theory founded upon mere conjecture, or weak premises, and I earnestly solicit close and searching investigation from all available sources; and that the facts and evidences obtained may be placed before competent philologues and ethnologists.

APPENDIX.

COMPARATIVE VOCABULARY OF POLYNESIAN WORDS.

Of the Polynesian Dialects here mentioned it should be remembered that a large number of natives of other islands, not noticed here, speak the same languages as those given under the names of Tahitian, Rarotongan and Samoan; for instance:—

Tahitian is spoken by the peoples of the Society, Georgian, and Austral Groups, and also by the natives of the neighbouring isolated islands in the north.

Rarotongan is the language of the people of the Hervey Group, or Cook's Islands, also of the widely-scattered atoll islands of Penrhyn, Manahiki, Raka-anga, Pukapuka, etc., with some slight differences.

Samoa, or Navigator's Islands: the refined language of Samoa is also the tongue of the people of the Ellice Islands and the Union Group, with some slight modifications and variations.

Malayan is spoken throughout the Malayan Archipelago, with more or less purity. I have a list of some 700 Samoan words connected with Malayan roots, and bearing evidence that the Eastern Polynesians left the Malayan regions prior to the Arabian invasion and introduction of Arabic additions to the Malayan tongue.

COMPARATIVE VOCABULARY OF

1. English	...	<i>Sun</i>	...	...	<i>Moon</i>	...	...	<i>Heavens</i>	...	...	<i>Star</i>	...	...
2. Malayan	...	Mata-ari, Lasi	...	Bulan, Fasina	...	Langit	...	...	Bintang, Fatui	...			
3. Samoan	...	La	...	Māsina	...	Langi	...	...	Fetū	...	...
4. Niuéan	...	La	...	Mahina	...	Langi	...	...	Fetū	...	...
5. Tongan	...	La'a	...	Mahina	...	Langi	...	...	Fetu'u	...	...
6. Fijian	...	Singa	...	Vula	...	Lomalangi	...	...	Kālokālo	...	...
7. Hawaiian	...	La, Ra	...	Mahina, Malama	...	Lani	...	...	Hokū	...	...
8. Marquesan	...	A, Aomati	...	Mahina, Meama	...	Aki	...	...	Fetū, Hetū	...			
9. Tahitian	...	Ra, Mahana	...	Marama	...	Ra'i	...	...	Feti'a, Fetu	...			
10. Paumotuan	...	Hana	...	Kavake	...	Rangi	...	...	Hetu	...	...
11. Mangarevan	...	Ra	...	Maina, Marama	...	Rangi	...	...	Etu	...	...
12. Rarotongan	...	Ra	...	Marama, Ahoroa	...	Rangi	...	...	Etu	...	...
13. Maori	...	Ra, Komaru	...	Mahina, Marama	...	Rangi, Raki	...	...	Whetu	...	...
14. Rotuman	...	Asta	...	Hula	...	Langi	...	...	Hefu	...	...
15. Tokelauan	...	La	...	Masina	...	Langi	...	...	Fetū	...	...
16. Motu	...	Dina	...	Hua	...	Guba	...	...	Hisiu	...	...
17. Malagasy	...	Māsoandro ¹	...	Volana	...	Lanitra	...	...	Kintana	...	...

¹ "O" is pronounced as "u" in Madagascar,

1. English	...	<i>Light</i>	...	...	<i>Darkness</i>	...	...	<i>Heat</i>	...	...	<i>Cold</i>	...	...
2. Malayan	...	Tamarains, Trang	Galap, Klam	...	Kā-pānas-an	...	Dingin	...	...		
3. Samoan	...	Malamalama	Pouliuli	...	Vevela	...	Ma'alili	...	...		
4. Niuéan	...	Ma'ama	Pouli	...	Mafana	...	Makalili	...	...		
5. Tongan	...	Māma	Bouli	...	Mafana, Vevela	...	Mokojia	...	...		
6. Fijian	...	Rarama	Butobuto	...	Katakata	...	Liliua	...	...		
7. Hawaiian	...	Malamalama, Ao	Pouri, Poeleele	...	Vela, Vera	...	Anu, Hau	...	...		
8. Marquesan	...	Maama, Ao	Potana	...	Vea	...	Anu	...	...		
9. Tahitian	...	Maramarama	Poiri	...	Mahanahana	...	Maariri	...	...		
10. Paumotuan	...	Marakorako	Potangotango	...	Veravera	...	Makariri, Anuanu	...	...		
11. Mangarevan	...	Marama	Pouri	...	Hana, Vera	...	Makariri	...	...		
12. Rarotongan	...	Mārama	Poiri	...	Veravera, Pukakā	Anu	...	...			
13. Maori	...	Ao, Marama	Pouri	...	Wera	...	Makariri, Matoke	...	...		
14. Rotuman	...	Taf	Maksulu	...	Pumahan, Sun	...	Matit	...	...		
15. Tokelauan	...	Ao	Po	...	Vevela	...	Ma'alili	...	...		
16. Motu	...	Diari	Dibura	...	Siahu	...	Keru	...	...		
17. Malagasy	...	Hazavana	Aizina	...	Halanana	...	Hātsiaka	...	...		

POLYNESIAN WORDS.

1. <i>Cloud</i>	...	<i>Rain</i>	<i>Lightning</i>	<i>Thunder</i>	<i>Wind.</i>
2. Awan	...	Hujan, Uan	...	Kilat	...	...	Gūruh	...	...	Angin.
3. Ao	...	Uā	...	Uila	...	...	Faititili	...	...	Matangi.
4. Aho	...	Uha	...	Uhila	...	...	Paku-langi	...	...	Matangi.
5. Ao	...	Uha	...	Uhila	...	...	Faijijili, Mana	...	...	Matangi.
6. O, Loalon	...	Utha	...	Liva	...	...	Kurukuru	...	...	Thangi.
7. Ao	...	Uā	...	Uwila, Uila	...	Hekili	...	...	...	Makani.
8. Ao	...	Uā	...	Uira	...	Hatiitii	...	...	...	Matani, Metaki.
9. Ata	...	Uā	...	Uira	...	Patiri, Haruru	...	...	...	Mata'i.
10. Paku	...	Papape	...	Koviri	...	Fatitiri	...	...	...	Matangi.
11. Ao	...	Uā	...	Uira	...	Atutiri	...	...	...	Matangi.
12. Tumurangi	...	Uā	...	Uira	...	Mangungu	...	...	...	Matangi.
13. Kapua, Au	...	Uā	...	Uira	...	Whatitiri, whaitiri	...	...	...	Matangi, Hau.
14. Aoga	...	Usa	...	Mere	...	Too	...	...	...	Langi.
15. Ao	...	Uā	...	Uila	...	Faititili	...	...	...	Matangi.
16. Ori, Daga-daga	...	Mēdu	...	Kevaru	...	Guba rahua	...	...	...	Lāi.
17. Rahona	...	Ranarana	...	Helatra	...	Kotrokorana	...	...	...	Rivotra.

for which it has evidently been substituted.

1. <i>Day</i>	...	<i>Night</i>	<i>Fire</i>	<i>Land</i>	<i>Mountain.</i>
2. Ari, Ao aoa	Mälam, Bungi	...	Api	...	...	Tanah	...	...	...	Günong.
3. Ao	Po	...	Afi	...	...	Fanua	...	...	...	Maunga.
4. Aho	Po	...	Afi	...	...	Fonua	...	...	...	Mounga.
5. Aho	Bo	...	Afi	...	...	Fonua	...	...	...	Mounga.
6. Singa	Bongi	...	Buka	...	...	Vanua	...	...	...	Ulu-ni-vanua.
7. Ao, Laokoa	Po	...	Ahi	...	...	Aina, Honua	...	...	...	Mouna.
8. Ao	Po	...	Ahi	...	...	Fenua, Henua	...	...	...	Mouna.
9. Ao, Mahana	Rui	...	Ahi	...	...	Fenua	...	...	...	Mau'a.
10. Aku, Auina	Ruki	...	Neki, Korure	...	...	Fenua	...	...	...	Mahunga.
11. Ao	Po	...	Ahi	...	...	Nuku, Enua	...	...	...	Māngā, Mou.
12. Ao	Po	...	A'i	...	...	Enua	...	...	...	Maunga.
13. Ao, Ra	Po	...	Ahi, Kanaku, Ka-pura	...	...	Whenua	...	...	...	Maunga, Mounga.
14. Ran	Pongi	...	Rahi	...	...	Hanua	...	...	...	Solo.
15. Ao	Po	...	Afi	...	...	Fenua	...	...	...	Maunga.
16. Dina	Boi, Hanuaboi	...	Lāhi	...	...	Tano-bada	...	...	...	Orooro.
17. Andro	Alina	...	Afo	...	...	Tany	...	...	...	Tendrombohitra.

COMPARATIVE VOCABULARY OF

1. English	...	<i>Stone</i>	...	...	<i>Sand</i>	...	...	...	<i>Sea</i>	...	...	...	<i>Water</i>	...	...
2. Malayan	...	Batu	...	...	Pasir	...	...	...	Tasek, Tahi	...	...	...	Ayer, Wai...	...	...
3. Samoan	...	Ma'a, Fatu	...	...	Oneone	...	...	...	Sami, Moäna, Ta'i	...	Vai	...	...	...	...
4. Niuéan	...	Maka	...	...	Oneone	...	...	...	Tahi	...	...	...	Vai	...	...
5. Tongan	...	Maka	...	...	Oneone	...	...	...	Tahi, Moäna	...	...	...	Vai	...	...
6. Fijian	...	Vatu	...	...	Nukunuku...	...	...	...	Waitui, Tathi	...	...	...	Wai	...	...
7. Hawaiian	...	Pohaku	...	...	One	...	...	...	Kai...	...	...	...	Wai	...	...
8. Marquesan	...	Kea	...	...	Oneone	...	...	...	Tai, Moäna	...	...	...	Vai	...	...
9. Tahitian	...	Ofa'i, Toa	...	...	One	...	...	...	Miti, Tai, Moana	...	...	...	Vai, Pape ...	...	...
10. Paumotuan	...	Konao, Pakaketa	...	...	Ngaere	...	...	...	Moäna	...	...	...	Komo	...	...
11. Mangarevan	...	Poatu	...	...	One, Oneone	...	...	...	Moäna	...	...	...	Vai	...	...
12. Rarotongan	...	Toka, Fatu	...	...	One	...	...	...	Tai, Moäna	...	...	...	Vai	...	...
13. Maori	...	Kamaka, Toka, Pow-hatu.	...	...	Onepū	...	...	...	Moäna, Tai	...	...	...	Wai	...	...
14. Rotuman	...	Hof	...	...	Fanfan	...	...	...	Tari, Sosi	...	...	...	Voi, Tanu, Tonu ...	...	...
15. Tokelauan	...	Fatu	...	...	Oneone	...	...	...	Moäna	...	...	...	Vai	...	...
16. Motu	...	Nadi	...	...	Raria	...	...	...	Davara	...	...	...	Ranu	...	...
17. Malagasy	...	Vato	...	...	Fasika	...	...	...	Ranomasina, Riaka	...	Rano	...	...	...	...

1. English	...	<i>Mother</i>	...	...	<i>Brother</i>	...	...	...	<i>Sister</i>	...	...	...	<i>Chief</i>	...	...
2. Malayan	...	Ina, Mentua	...	...	Sudára, Abang (eldest)	...	...	...	Sudára perampuan, Abang (eldest)	...	...	...	Damang, Tuan	...	...
3. Samoan	...	Tinā	...	...	{ Ueo (brothers) ...	...	...	...	Uso (sisters) ...	...	...	...	Ali'i, Tui	...	...
4. Niuéan	...	Matua-fifine	...	...	{ Tuangane (sisters) ...	...	...	...	Tuahafine (brothers) ...	...	...	...	Mahakitanga (brothers) ...	...	Iki, Patuiki
5. Tongan	...	Fa'e	...	...	{ Matakinanga (brothers) ...	...	...	...	Matakinanga (sisters) ...	...	...	...	Tuofefine (brothers) ...	...	Eiki, Tui...
6. Fijian	...	Tinā	...	...	{ Tungane (sisters) ...	...	...	...	Tehina (brothers) ...	...	...	...	Tehina (sisters) ...	...	Tuakana (brothers) ...
7. Hawaiian	...	Makua hine	...	...	{ Tehina (brothers) ...	...	...	...	Tuakanae (sisters) ...	...	...	...	Tuakana (sisters) ...	...	Kaiku-wahine (brothers) ...
8. Marquesan	...	Kui...	...	...	{ Tuakane (brothers) ...	...	...	...	Tusana (brothers) ...	...	...	...	Hoahanau (sisters) ...	...	Ari'i ...
9. Tahitian	...	Metua vahine	...	...	{ Tuakane (sisters) ...	...	...	...	Tuakane (brothers) ...	...	...	...	Tuakana (brothers) ...	...	Hakaiki ...
10. Paumotuan	...	Makua hine	...	...	{ Tuaana (sisters) ...	...	...	...	Taeae (brothers) ...	...	...	...	Tuaana (sisters) ...	...	Ali'i, Fatu ...
11. Mangarevan	Kui...	...	...	...	{ Tuaana (brothers) ...	...	...	...	Deina (brothers) ...	...	...	...	Tuaahine (brothers) ...	...	Ariki, Pupuariki
12. Rarotongan	...	Metua vainé	...	...	{ Tungane (sisters) ...	...	...	...	Tungane (sisters) ...	...	...	...	Tuhine (brothers) ...	...	Ariki ...
13. Maori	{ Matua wahine, Waea	...	...	...	{ Teina (brothers) ...	...	...	...	Teina (brothers) ...	...	...	...	Teina (sisters) ...	...	Ariki ...
14. Rotuman		Oihoni	...	...	{ Tungane (sisters) ...	...	...	...	Tungane (sisters) ...	...	...	...	Tuaine (brothers) ...	...	Ngangata, Pure'aki
15. Tokelauan	...	Matua	...	...	{ Sosinga (brothers) ...	...	...	...	Teina (brothers) ...	...	...	...	Teina (sisters) ...	...	Ariki ...
16. Motu	...	Sinana	...	...	{ Sangoeveni (sisters) ...	...	...	...	Tadina (younger) ...	...	...	...	Tuahine (brothers) ...	...	Lohia, Lohiabada (high)
17. Malagasy	...	Reny	...	...	{ Kakana (elder) ...	...	...	...	Rahalahy (brothers) ...	...	...	...	Tadina (sisters) ...	...	Mpanjaka, Andriana (royal)
					{ Kakana (younger) ...	...	...	...	Anabavy (brothers) ...	...	...	...	Anabavy (sisters) ...	...
					{ Analahy (sisters) ...	...	...	...	Rahalahy (sisters) ...	...	...	...	Rahavavy (sisters) ...	...

POLYNESIAN WORDS.

<i>1. Man</i>	<i>2. Orang láki-láki</i>	<i>3. Tangata</i>	<i>4. Tangata</i>	<i>5. Tangata</i>	<i>6. Tamata</i>	<i>7. Kanaka</i>	<i>8. Enata</i>	<i>9. Ta'ata</i>	<i>10. Tangata</i>	<i>11. Tangata</i>	<i>12. Tangata</i>	<i>13. Tangata</i>	<i>14. Lee</i>	<i>15. Tangata</i>	<i>16. Tauna, Tā-unimanima</i>	<i>17. Lehilahy</i>	<i>Woman</i>	<i>(wife)</i>	<i>Boy</i>	<i>Girl</i>	<i>Father.</i>	
																		Perampuan,	Bini	Anak-lákiláki	Anak perampuan...	Bapa, Rama.
																	Fafine		Tamā	Teine		Tamā.
																	Fifine		Tamā	Tamā-fine		Mātua.
																	Fefine		Tamā	Ta'a-hine		Tamai.
																	Alewa		Ngone tangana	Ngone-alewa		Tamā.
																	Wahine		Kamā, Keika kane	Kaikama hine		Makua kane.
																	Vehine		Mahai	Pahoe		Motua.
																	Vahine		Tamā iti, Tamārii	Tamā hine		Metua tane.
																	Mahine, Morire		Makaro	Manania		Makui.
																	Ahine, Aine		Tamā	Tama hine		Motua.
																	Vaine		Tamāroa, Tamaiti	Tamaime		Metua tane.
																	Wahine		Tamā iti	Hine, Kohine		Matus, Pāpā.
																	Honi, Hen		Lee lili, Fameamea	Lee honi		Oifa.
																	Fafine		Tamā	Teine		Tamā.
																	Hahine		Mero	Kekeni, Haniulata		Tamana.
																	Vehivavy		Zazalahy	Zazavavy		Ray, Baba.

1.	<i>Belly</i>	...	<i>Navel</i>	<i>Breast</i>	<i>Hand</i>	<i>Finger.</i>
2.	<i>Prut</i>	...	<i>Pusat</i>	...	...	<i>Dada, Susu</i>	...	<i>Tangan</i>	...	...	<i>Jari.</i>
3.	<i>Manāava</i>	...	<i>Pute</i>	...	...	<i>Fatafata, Susu</i>	...	<i>Lima</i>	...	...	<i>Tamatama'i-lima.</i>
4.	<i>Manava</i>	...	<i>Pito</i>	...	...	<i>Fatafata, Huhu</i>	...	<i>Lima</i>	...	...	<i>Matalima.</i>
5.	<i>Ngete</i>	...	<i>Bito</i>	...	...	<i>Huhu</i>	...	<i>Nima</i>	...	...	—
6.	<i>Kete</i>	...	—	—	—	<i>Suthu</i>	...	<i>Linga</i>	...	...	<i>Iqaqalo-ni-linga.</i>
7.	<i>Kaopu</i>	...	<i>Piko</i>	...	...	<i>U</i>	...	<i>Lima</i>	...	...	<i>Manamanalima.</i>
8.	<i>Opu</i>	...	<i>Pito</i>	...	...	<i>U</i>	...	<i>Ima</i>	...	...	—
9.	<i>Opu</i>	...	<i>Pito</i>	...	...	<i>U</i>	...	<i>Rima</i>	...	...	—
10.	<i>Kopu</i>	...	<i>Pito</i>	...	...	<i>Kouma, U</i>	...	<i>Rima</i>	...	...	<i>Manemanea.</i>
11.	<i>Kopu</i>	...	<i>Pito</i>	...	...	<i>U</i>	...	—	—	—	—
12.	<i>Kopu</i>	...	<i>Pito</i>	...	...	<i>U</i>	...	<i>Rima</i>	...	...	<i>Maikao.</i>
13.	<i>Kopu, manawa</i>	...	<i>Pito</i>	...	...	<i>U</i>	...	<i>Ringa</i>	...	...	<i>Matihao.</i>
14.	<i>Efe</i>	...	—	—	—	<i>Fatfat, Sus</i>	...	<i>Haephaep</i>	...	...	<i>Kakae.</i>
15.	—	—	—	—	—	—	—	—	—	—	—	
16.	<i>Boka</i>	...	<i>Udo</i>	...	...	<i>Geme</i>	...	<i>Ima-palapala</i>	...	...	<i>Ima-qagiqagi.</i>
17.	<i>Kito</i>	...	<i>Foitra</i>	...	...	<i>Tratra</i>	...	<i>Tanana</i>	...	...	<i>Rantsan-tanans.</i>

COMPARATIVE VOCABULARY OF

1. English	...	<i>Foot</i>	...	...	<i>Blood</i>	...	...	<i>Bone</i>	...	...	<i>Skin</i>	...	...
2. Malayan	...	Kaki	...	...	Darah	...	...	Tulang	...	...	Kulit	...	...
3. Samoan	...	Vae	...	...	Toto	...	...	Ivi	...	...	Pa'u	...	...
4. Niuéan	...	Hui....	...	...	Toto	...	...	Hui....	...	...	Kili	...	...
5. Tongan	...	Vae	...	...	Toto	...	...	Hui....	...	...	Kili	...	...
6. Fijian	...	Yava	...	...	Dra....	...	...	Sui	...	...	Kuli	...	...
7. Hawaiian	...	Wawae	...	...	Koko	...	...	Iwi	...	...	Ili	...	...
8. Marquesan	...	Vaevae	...	...	Toko	...	...	Ivi	...	...	Iri	...	...
9. Tahitian	...	avae	...	...	Toto	...	...	Ivi	...	...	Iri	...	...
10. Paumotuan	...	Vaevae	...	...	Tikairi	...	...	Keiga	...	...	Kiri	...	...
11. Mangarevan	...	Vavae	...	...	Toto	...	...	Ivi	...	...	Kiri	...	...
12. Rarotongan	...	Vaevae	...	...	Toto	...	...	Ivi	...	...	Kiri	...	...
13. Maori	...	Wae	...	...	Toto	...	...	Iwi	...	...	Hiako, kiri....	...	...
14. Rotuman	...	Aftea	...	...	Tot	...	...	Sui	...	...	Ul	...	...
15. Tokelauan	...	—	—	—	—	—	—	—	—	—	—	—	—
16. Motu	...	Ae-palapala	...	Rara	...	...	Turia	...	...	Kopi	...	...	...
17. Malagasy	...	Tongotra	...	Ra	...	...	Taolana	...	...	Hoditra	...	...	...

1. English	...	<i>Nose</i>	...	...	<i>Mouth</i>	...	...	<i>Tongue</i>	...	...	<i>Tooth</i>	...	...
2. Malayan	...	Hidong	...	...	Mulut	...	...	Lidah	...	...	Gigi	...	...
3. Samoan	...	Isu	...	...	Ngutu	...	...	Laulaufaiva (Alelo)	...	...	Nifo	...	...
4. Niuéan	...	Ihu	...	...	Ngutu	...	...	Alelo	...	...	Nifo	...	...
5. Tongan	...	Ihu	...	...	Ngutu	...	...	Elelo	...	...	Nifo	...	...
6. Fijian	...	Uthu	...	...	Ngusu	...	...	Yame	...	...	Bati	...	...
7. Hawaiian	...	Ihu	...	...	Waha	...	...	Alelo	...	...	Niho	...	...
8. Marquesan	...	Ihu	...	...	Vaha	...	...	Eeo....	...	...	Niho	...	...
9. Tahitian	...	Ihu	...	...	Vaha	...	...	Arero	...	...	Niho	...	...
10. Paumotuan	...	Ihu	...	...	Vaha	...	...	Arero	...	...	Niho	...	...
11. Mangarevan	...	Ihu	...	...	Haha, Aha	...	...	Erero	...	...	Niho	...	...
12. Rarotongan	...	Puta-iu	...	Vaa....	...	...	Arero	...	...	Nio....	...	...	...
13. Maori	...	Ihu	...	...	Mangai, Waha	...	...	Arero	...	...	Niho	...	...
14. Rotuman	...	Isu	...	...	Nuj	...	...	Alele	...	...	Ala....	...	...
15. Tokelauan	...	—	—	—	—	—	—	—	—	—	—	—	—
16. Motu	...	Udu	...	...	Udu	...	...	Mala	...	...	Hise	...	...
17. Malagasy	...	Orona	...	Vava	...	...	Lela	...	...	Nify	...	...	...

POLYNESIAN WORDS.

1. Head	...	Hair	Face	Eye	Ear.
2. Kōpāla (hu- lu)	...	Rambut, bulu	...	Muka	...	...	Mata	...	...	Telinga.
3. Ulu	...	Lau-ulu	...	Mata	...	...	Mata	...	...	Talinga.
4. Ulu	...	Lau-ulu	...	Mata	...	...	Mata	...	...	Telinga.
5. Ulu	...	Lo-ulu	...	Mata	...	...	Mata	...	...	Telinga.
6. Ulu	...	Drau-ni-ulu, Vulua	Mata	...	...	Mata	...	...	Dalinga.	
7. Poo	...	Hulu	...	Kamaka	...	...	Maka	...	...	Pepeiao.
8. Upoo	...	Ouoho, huu	...	Mata	...	...	Mata	...	...	Puaina.
9. Upoo	...	Huruhuru	...	Mata	...	...	Mata	...	...	Taria.
10. Maro, Pan- ene, Pepenu	...	Huruhuru	...	Mata, nohi	...	Nohi	...	...	...	Taringa.
11. Upoko	...	Huru Uru	...	—	—	Mata	...	...	...	Teringa.
12. Upoko	...	Rau-uru	...	Mata	...	...	Mata	...	...	Taringa.
13. Upoko	...	Huruhuru	...	Mata	...	...	Kanohi	...	...	Taringa.
14. Filou	...	Leva	...	Maf	...	...	Mafa	...	...	Faliang.
15.	—	—	—	—	—	—	—	—	—	—	
16. Qara	...	Hui	...	Vaira	...	...	Mata	...	...	Taia.
17. Loha	...	Volo	...	Tarehy	...	...	Maso	...	...	Sofina.

1. Tree	...	Cocoanut	...	Breadfruit	...	Yam	...	...	Taro.
2. Puhn	...	Nior, Nür	...	Sukun, Kuru	...	Ubi	...	...	—
3. La'au	...	Niu	...	'Ulu	...	Ufi	...	...	Talo.
4. Akau	...	Niu	...	Mei	...	Ufi	...	...	Talo.
5. Akau	...	Niu	...	Mei	...	Ufi	...	...	Taro.
6. Kau	...	Niu	...	Uto	...	Uvi	...	...	Dalo.
7. Raau, Laau	...	Niu	...	Mei, Uru	...	Uhi	...	...	Kalo.
8. Kaau, Akau	...	Eehi	...	Mei	...	Bua-uhī	...	...	Tao.
9. Raau	...	Haari, Niu	...	Uru	...	Uhi	...	...	Taro.
10. Rakau	...	Niu	...	Kuru	...	Uhi	...	...	Fakea-matietie.
11. Rakau	...	Nikau, Niu	...	Nohunohu	...	Uhi	...	...	—
12. Rakau	...	Niu, Nu	...	Kuru	...	Ui	...	...	Taro.
13. Rakau	...	Nikau	...	—	—	Uhi	...	...	Taro.
14. Oi	...	Niu	...	Ul	...	Uk	...	...	—
15. Lakau	...	Niu	...	—	—	Ufi	...	...	Talo.
16. Au	...	Niu, Ngaru	...	Ūnu	...	Uhe, Maho	...	...	Talo.
17. Hazo	...	Voanio, Nio	...	—	—	Ovi	...	...	—

COMPARATIVE VOCABULARY OF

1. English	...	Sugar-cane	...	Banana	...	...	Pig	...	...	Fish	...	...
2. Malay	...	Tubbū, Toro	...	Pisang	...	...	Babi	...	...	Ikan, Ika	...	...
3. Samoan	...	Tolo	...	Fa'i	...	...	Pua'a	...	...	I'a	...	...
4. Niuéan	...	To	...	Futi	...	...	Puaka	...	...	Ika	...	...
5. Tongan	...	To	...	Hopa	...	...	Buaka	...	...	Ika	...	...
6. Fijian	...	Ndovu	...	Vuni, Vote	...	...	Vuaka	...	...	Ika	...	...
7. Hawaiian	...	Ko	...	Maia	...	...	Puaa	...	...	I'a	...	...
8. Marquesan	...	To	...	Meika	...	...	Puna	...	...	Ika	...	...
9. Tahitian	...	To	...	Mei'a	...	...	Pua'a	...	...	I'a	...	...
10. Paumotuan	...	To	...	Meika	...	...	Puaa	...	...	Ika, Paru	...	...
11. Mangarevan	...	To	...	Meika	...	...	Puaka	...	...	Ika	...	...
12. Rarotongan	...	To	...	Meika	...	...	Puaka	...	...	Ika	...	...
13. Maori	...	—	—	—	—	—	Ponka, Puaa	...	...	Ika	...	...
14. Rotuman	...	Thou	...	Per	...	...	Puaka	...	...	I'a	...	...
15. Tokelauan	...	—	—	Fai	...	...	Puaka	...	...	Ika	...	...
16. Motu	...	Tohu	...	{ Dui (plant) Bigu (fruit) }	...	...	Boroma	...	...	Qaruime	...	...
17. Malagasy	...	Fary	...	Akondro	...	...	Kisoa	...	...	Hazandrano	...	...

¹ Many Melanesian words for "house" are derived from

1. English	...	Bow	...	...	Arrow	...	...	Good	...	...	Bad	...	...
2. Malayan	...	Pānah	...	...	Anak-pānah	...	...	Baik, Fia	...	...	Büruk, Leak	...	...
3. Samoan	...	'Aufana	...	...	U	...	...	Lelei	...	...	Leanga	...	...
4. Niuéan	...	Kaufana	...	...	Fana	...	...	Mitaki	...	...	Kelea	...	...
5. Tongan	...	Kaufana	...	...	Kaho	...	...	Lelei, Marie	...	...	Kovi	...	...
6. Fijian	...	Dakai, Yueu	...	...	Ngāsau	...	...	Vinaka	...	...	Tha	...	...
7. Hawaiian	...	Pana	...	...	Pua-pana	...	...	Maitai, Pono, Pua	...	Ino	...	...	...
8. Marquesan	...	Pana	...	...	Koniū	...	...	Meitai	...	...	Po	...	...
9. Tahitian	...	Fana	...	...	Ohe	...	...	Maita'i	...	...	Ino	...	...
10. Paumotuan	...	Poro-fana	...	...	Teka	...	...	Maitaki, Viru	...	...	Kiro, Manuanu	...	...
11. Mangarevan	...	Pana	...	...	—	—	—	Marie	...	...	Kino	...	...
12. Rarotongan	...	Ana	...	...	—	—	—	Meitaki	...	...	Kino	...	...
13. Maori	...	Whana	...	...	Pere	...	...	Pai	...	...	Kino	...	...
14. Rotuman	...	Loloki, Fan	...	...	Fana	...	...	Lelei	...	...	Raksa	...	...
15. Tokelauan	...	—	—	—	—	—	—	Lelei	...	...	Leanga	...	...
16. Motu	...	Peva	...	...	Diba	...	...	Namo	...	...	Dika	...	...
17. Malagasy	...	Isipiki	...	...	Zanatsipika	...	...	Tsara, Soa	...	...	Ratsy	...	...

POLYNESIAN WORDS.

<i>1. Fowl</i>	<i>... House</i>	<i>... Canoe</i>	<i>... Club</i>	<i>... Spear.</i>
2. Ayam, Hayan	Rumah, Fari ¹	Prau, Sampan, Wangkang	Gāda, Palu, Tokam	Tombak.
3. Moa ...	Fale ...	Va'a ...	Uatongi ...	Tao.
4. Moa ...	Fale ...	Vaka ...	Lakau ...	Tao.
5. Moa ...	Fale ...	Vaka ...	Akau ...	Tao.
6. Toa, Manu-manu	Vale ...	Waqa ...	Wau, Nai ...	Moto.
7. Moa, Manu ...	Hale, Hare ...	Wa'a, Vaka ...	Nēua ...	Ihe, Kao, Polulu.
8. Moa, Manu ...	Hae ...	Vaka, Vaa ...	Akau-toa ...	Pakeo.
9. Moa ...	Fare ...	Vaa, Pahi ...	Raau ...	Mahae, Tao, Niu.
10. Moa, Manu ...	Fare ...	Vaka ...	Parangi ...	Komore.
11. Moa ...	Hare ...	Vaka ...	—	Tao.
12. Moa ...	Are ...	Vaka ...	Lupo ...	Korare.
13. Tikaokao	Whare ...	Waka ...	Patu, Mere, Mere-mere	Tao, Matia.
14. Moa, Manu-manu	Ri ...	Katea ...	Omus-oi ...	Jau.
15. Moa ...	Fale ...	Vaka ...	—	Tao.
16. Kokorogu	Ruma ...	Vanagi (small), Asi (large)	Kaleva (wood), Gahi (stone)	Io.
17. Akoho	Trano ...	Lakana ...	Zara ...	Lefona.

rumah. Malayan *Fari* is a large house, court, or palace.

<i>1. Great</i>	<i>... Small</i>	<i>New</i>	<i>Old</i>	<i>Near.</i>
2. Besar	Kechil, Kiiti-kiiti...	Bhārū	Tūah	Dekat, Ara.
3. Tele, Nui	Kiiti	Fou	Tuai	Latalata.
4. Lahi ...	Tote	Fou	Tuai	Tata mai.
5. Lahi ...	Jii	Fou	Tuai	Oū, Tata.
6. Levu...	Lailai	Vou	Mandra	Voleka.
7. Nui, Loa	Iki, Poko	Hou	Kahito	Kokoke.
8. Nui ...	Iti	Hou	Kahiu, Tehito	Tata.
9. Rahi, Nui	Iti	Hou, Api	Tahito	Fatata.
10. Paneke	Korerekā	Hou	Tahito, Veruveru ...	Fakaka, Fakuño.
11. Tere, Nui	Nik	Hou	Taito	Tutata, Taha.
12. Māta...	Ngiti	Ou	Hamiriatus, Taito	Vaitata.
13. Rahi, Nui	Nohinohi, Iti	Hou	Tawhito, Auki	Tata, Tutata.
14. Te'u, Tete'u	Me'amē'a	Fou	Kekel	Hoieleung.
15. Tele ...	Itiiti	Fou	Leva	Late mai.
16. Pata ...	Maragi	Matamata	Gunana	Kahilakshūa.
17. Lehibe	Kely, Madiniki	Vaovao	Antitra, Ela	Akaiky.

COMPARATIVE VOCABULARY OF

1. English	....	<i>Distant</i>	....	....	<i>To Live</i>	....	....	<i>Die</i>	....	....	<i>Breathe</i>	....	....
2. Malayan	...	Jāūh	....	....	Ber-idup	....	....	Mati	....	....	Nafas, Bernafas	...	...
3. Samoan	...	Mamao	....	....	Ola	....	....	Oti, Mate	....	....	Mānava	....	...
4. Niuéan	...	Mamao	....	....	Moui	....	....	Mate	....	....	Fafangu	....	...
5. Tongan	...	Mamao	....	....	Moui	....	....	Mate	....	....	Mānava	....	...
6. Fijian	...	Yawa	....	....	Bula	....	....	Mate	....	....	Thengu	....	...
7. Hawaiian	...	Mamao, Loihiaiku	'Ola	....	....	....	....	Make	....	....	Hanu	....	...
8. Marquesan	...	Memao	....	....	Pohoe	....	....	Mate	....	....	Mānava	....	...
9. Tahitian	...	Te, atea	....	..	Ora	....	....	Pohe, Mate	....	....	Hufi te aho	....	...
10. Paumotuan	...	Mamao, Maoro-takake	Ora	....	....	....	....	Mate	....	....	Anave	....	...
11. Mangarevan	...	Mamao	...	..	Ora	....	....	Mate	....	....	—	—	—
12. Rarotongan	...	Mamao	....	....	Ora	....	....	Mate	....	....	A'o	....	...
13. Maori	...	Mamao, Tawhiti	Ora	....	....	....	....	Mate	....	....	Manawa, Whakaha	....	...
14. Rotuman	...	Sousou	....	....	Mauri	....	....	Ala	....	....	Huang	....	...
15. Tokelauan	...	Mamao	....	....	Ola	....	....	Mate	....	....	Mānava	....	...
16. Motu	...	Daudau	....	....	Mauri	....	....	Mate	....	....	Laga	....	...
17. Malagasy	...	Lavitra	....	....	Velona	....	....	Maty	....	....	Miaina	....	...

1. English	....	<i>To go</i>	....	....	<i>Come</i>	....	....	<i>Eat</i>	....	....	<i>Drink</i>	....	...
2. Malayan	...	Pergi, Pai	....	...	Datang, O mai	....	....	Makan	....	....	Minum	....	...
3. Samoan	...	Alu, O (pl.)	...	...	Sau, ¹ O mai (pl.)	....	....	'Ai	....	....	Inu	....	...
4. Niuéan	...	Fano, Haele, O (pl.)	...	...	Haele mai, O mai (pl.)	....	....	Kai	....	....	Inu	....	...
5. Tongan	...	Alu, O (pl.)	...	...	Hau, Alu, O (pl.)	....	....	Kai	....	....	Inu	....	...
6. Fijian	...	Lako	....	...	Lako mai	....	....	Kana	....	....	Ngunu	....	...
7. Hawaiian	...	Here, Hele aku	...	...	Here mai; Hele mai	...	....	Ai	....	....	Inu, Unu	....	...
8. Marquesan	...	He'e	....	...	A mai	....	....	Kai, Kaikai	....	....	Inu	....	...
9. Tahitian	...	Haere atu	....	...	Haere mai	....	....	Amu	....	....	Inu	....	...
10. Paumotuan	...	Haere atu	....	...	Haere mai	....	....	Kai, Ngau	....	....	Kami, Komo	...	...
11. Mangarevan	...	Ere	....	...	Ere mai, Nau mai	....	....	Kai	....	....	Inu	....	...
12. Rarotongan	...	Aere atu	....	...	Aere mai, Tae	....	....	Kai	....	....	Inu, Unu	....	...
13. Maori	...	Haere atu	....	...	Haere mai	....	....	Kai, Ngai	....	....	Inu, Unu	....	...
14. Rotuman	...	La'o	....	...	Leum, Heleu	....	....	Ate, Telsa	....	....	Iom	....	...
15. Tokelauan	...	Alu	....	...	Sau	....	....	Kai	....	....	Inu	....	...
16. Motu	...	Lao	....	...	Mai	....	....	Ania	....	....	Inua	....	...
17. Malagasy	...	Mandekap, Heli-hely	...	...	Avy, Avia	....	....	Homana, Mihinana	....	....	Misotro	....	...

¹ The word to or of chiefs is very different, and varies

POLYNESIAN WORDS.

1. See	Hear	Know	Think	Make.
2. Liat, Amata	Dangar	Tāū	Kira, Mengiea	Karja.
3. Va'ai, Mata-mata	Fa'alongo, Lan-gona	Iloa	Manatu	Fai.
4. Kite kite, Kitea	Fanongonongo	Iloa, Fioia	Manatu, Maua-manatu	Eke.
5. Ma m a t a, vakai	Fanongo	Ilo	Manatu	Ngaoki.
6. Raitha	Rongo	Kila	Nanuma	Thakava.
7. Ike	Lono	Ike	Mana'o	Hana.
8. Kite....	Hakaono	Kite	Metao	Pepena.
9. Ite, Hi'o	Fa'aro'o	Ite	Mana'o	Haa, Hamani.
10. Hipa	Rongo	Kite	Manako	Hanga, Patu.
11. Kite, Nana....	Rongo	Kite	Makara	Hanga.
12. Akalu, Kite	Rongo	Kite	Ma'ara	Angaanga, Maani.
13. Kite....	Rongo	Kite, Matau	Hua, Mahara	Hanga, waihangā.
14. Tel, Rae	Aafai	Inea	Ahae	Re.
15. Va'ai	Fakalongo	Iloa	Manatu	Fai.
16. Haia	Kamonai	Diba	Laloa	Karaia.
17. Mahita	Maharé, Mandre	Mahalala	Mihevitra	Manao.

1. Sit	Place	Laugh	Weep	Fear.
2. Duduk ...	Tarep	Tertawa, Galak	Tangis	Takut-an.
3. Nofo	Tu'u	'Ata, 'Ata'ata	Tangi, Auē	Fefe, Mata'u.
4. Nofo	Tuku	Kata	Tangi	Mataku.
5. Nofo	Tuku	Kata, Katakata	Tangi	Manavake.
6. Tiko	Viria	Drendre	Tangi	Rere.
7. Noho ...	Kau iho	Aka, Akaaka	Kani, U, Uē	Hopo, Mata'u.
8. Noho	Tu'u	Kata	Eue	Meta'u.
9. Noho, Parahi	Tu'u	Ata....	Ta'i....	Matau.
10. Noho, Tarau	Hakaruke	Kata	Tangi, Tatangi	Mataku.
11. Noho	Atatotoko	Kata	Tangi	Matake, Ete.
12. No'o	Tuku	Kata	Tangi, Auē	Mataku, Hopi.
13. Noho	Whiu	Kata	Tangi	Mataku, Hopi.
14. Noho-sio, Ho	Nasua, Popona	Kaha	Oouou	Fea, Mamoru.
15. Nofo	Tuku	Kata	Tangi	Mataku.
16. Helai	Atoa	Kiri	Tāi	Gari.
17. Mipetraka	Manetraka....	Mihomehy....	Mitomany	Mabahotra.

according to rank, such as *afio, susu, mariu.*

NEW SERIES, VOL. II, Nos. 1 AND 2.

COMPARATIVE VOCABULARY OF

1. English	<i>I</i>	<i>Thou</i>	<i>He, she, it</i>	<i>We (dual inclusive)</i>
2. Malayan	Aku, Daku, Kita	Kau, Dika	Iya, Inya	—
3. Samoan	A'u, 'Ita	Oe	Ia	Tāua
4. Niuéan	A'u	Koe	Ia	Tāua
5. Tongan	A'u	Koe	Ia	Tau
6. Fijian	A'u	Iko	Iya, Koia	Kendrau, Kendaru
7. Hawaiian	A'u, Wau	Oe	Ia	Kāua
8. Marquesan	A'u	Koe	Ia	Tāua
9. Tahitian	A'u, Vau	Oe	Ia	Tāua
10. Paumotuan	Vau	Koe	Ia	—
11. Mangarevan	A'u	Koe	Ia	Tāua
12. Rarotongan	A'u	Koe	Koia	Tāua
13. Maori	A'u, Akau	Koe	Ia	Tāua
14. Rotuman	Ngou	Ae, Ou	Ia	Itara
15. Tokelauan	A'u	Oe	Ia	Tāua
16. Motu	Lau	Oi	Ia	Ita rarnuti
17. Malagasy	Aho, Izaho	Hianao	Izy	—

1. English	<i>They (dual)</i>	<i>They (plural)</i>	<i>One</i>	<i>Two</i>	<i>Three</i>
2. Malayan	—	Orang, Kamu	Tahi, Sa, Satu, Dua Asa	Tua	Tiga
3. Samoan	Lāua	Latou	Tasi	Lua	Tolu
4. Niuéan	Lāua	Lautolu	Taha	Ua	Tolu
5. Tongan	Nāua	Lautolu, Nau	Taha	Ua	Tolu
6. Fijian	Rau	Ra, Ratou	Dua	Rua	Tolu
7. Hawaiian	Lāua	Lakou	Kabi	Lua	Kolu
8. Marquesan	Āua	Atou	Tahi	Ua	Tou, Toru
9. Tahitian	Rāua	Ratou	Tahi	Rua, Iti	Toru
10. Paumotuan	Rāua	Ratou	Rari	Piti	Naeti
11. Mangarevan	Rāua	Ratou	Tahi	Rua	Toru
12. Rarotongan	Rāua	Ratou	Ta'i	Rua	Toru
13. Maori	Rāua	Ratou	Tahi	Rua	Toru, Tengi
14. Rotuman	Iria	Iris, Oris	Taa, Esea	Rua	Folu
15. Tokelauan	Lāua	Latou	Tasi	Lua	Tolu
16. Motu	Idia rarnuti	Idia	Tamona	Rua	Toi
17. Malagasy	—	Izy	Isa, Iray	Roa	Telo

POLYNESIAN WORDS.

1. <i>We</i> (dual exclusive)	<i>We</i> (plural inclusive)	<i>We</i> (plural exclusive)	<i>You</i> (dual)	....	<i>You</i> (plural).
2. —	Kita	....	Kami	....	Kau.
3. Māua	Tatou	....	Matou	....	Oulua.
4. Māua	Tautolu	....	Mautolu	....	Mua.
5. Māua	Tau, Tautolu	....	Mautolu	....	Mousa.
6. Keīrau	Datou	....	Keimami	....	Kemundrau.
7. Māua	Kakou	....	Makou	....	Oluo.
8. Māua	Tatou	....	Matou	....	Koua.
9. Māua	Tatou	....	Matou	....	Orua.
10. Make	Tatou	....	Matou	....	Korua.
11. —	Tatou	....	Matou	....	Kotou.
12. Māua	Tatou	....	Matou	....	Kotou.
13. Māua	Tatou	....	Matou	....	Koutou.
14. Omiara	Is, La	....	Omis	....	Ausa.
15. Māua	Tatou	....	Matou	....	Ou, Ousa.
16. Ai raruoti	Ita	....	Ai	....	Oulua.
17. —	Isikia	....	Izahay	....	Hianareo.

1. <i>Four</i>	<i>Five</i>	<i>Six</i>	<i>Seven</i>	<i>Eight</i>	<i>Nine</i>	<i>Ten</i> .
2. Ampat	Lima	Anam	Tūjuh	Salāpan, De-japan	Sambilan	Sapūluh.
3. Fa	Lima	Ono	Fitu	Valu	Iva	Sefulu, Ngafulu.
4. Fa	Lima	Ono	Fitu	Valu	Hiva	Hongofulu.
5. Fa	Nima	Ono	Fitu	Valu	Hiva	Ngofulu.
6. Va	Lima	Ono	Vitu	Walu	Thiwa	Tini, Ngavulu.
7. Ha	Lima	Ono	Hiku	Walu	Iwa	Umi.
8. Ha	Ima	Ono	Itu, Fitu	Vau	Iva	Onohu'u.
9. Ha, Maha	Rima	Ono	Hitu	Varu	Iva	Ahuru.
10. Ope	Miha	Hene	Hito	Varu, Hava	Nipa	Horihori.
11. Ha	Rima	Ono	Hitu	Varu	Iva	Rongouru.
12. A	Rima	Ono	Itu	Valu	Iva	Ngauru.
13. Wha	Rima	Ono	Whitu	Waru	Iwa	Ngahuru.
14. Hake	Liam	Oon	Hif	Vol	Siar	Sanghulu.
15. Fa	Lima	Ono	Fitu	Valu	Iva	Sefulu.
16. Hani	Ima	Tauratoi	Hitu	Taurahani	Taurahanita	Qauta.
17. Efatra	Dimy, Limi	Enina	Fito	Valo	Sivy	Folo.

[Since the foregoing paper was sent to the Institute, information has been received of the author's death at Sydney, N.S.W. The Rev. Samuel Ella was born in 1823 and was one of the oldest missionaries of the London Missionary Society. He was accepted by the Society in 1847 and went out as printer to Samoa. He remained there for fourteen years, and was ordained a full missionary in 1860. After two years' stay in Sydney on account of ill-health, he went to Uvea, in the Loyalty Group, where he established a mission among the Melanesians of the island. He returned to Sydney in 1875 after eleven years' labour, and died on February 12th of this year. He was the translator of the New Testament into the Melanesian language of Iai, spoken on Uvea Island, and took great interest in all that concerned the Polynesian races. He had been President of the Australian Association for the Advancement of Science. To his kindness and courtesy the present writer owes much information on the languages of Southern Melanesia.—S. H. R.]

ANTHROPOLOGICAL REVIEWS AND MISCELLANEA.

Readers of the Journal are invited to communicate any new facts of especial interest which come under their notice. Short abstracts of, or extracts from, letters will be published at the discretion of the Editor. Letters should be marked "Miscellanea" and addressed to The Secretary, 3, Hanover Square, W.

NOTES ON THE LANGUAGES OF THE SOUTH ANDAMAN GROUP OF TRIBES. By M. V. Portman. Calcutta, 1898.

Although not a professed philologist, Mr. Portman has made good use of his opportunity as the officer in charge of the Andamanese natives for some years to give linguistic students a clear and accurate account of the remarkable form of speech current in several closely related varieties amongst these aborigines.

The present volume supplements and, where necessary, rectifies the extensive studies already made by Mr. E. H. Man and Colonel R. C. Temple, some of the results of which have appeared in this *Journal*. How important was the work done by these labourers in an obscure and particularly thorny field, appears from the fact that Mr. Man was the first to give written form to the Andamanese language, under quite exceptional difficulties, due to its astonishingly rich phonetic system, comprising no less than twenty-four distinct vowel and seventeen consonantal sounds. Mr. Man has also collected copious materials for a grammar and a dictionary of over 6,000 words, which he has, jointly with Colonel Temple, arranged for publication. Such of these materials as are available for reference have been utilised, together with a great deal of fresh data, in the preparation of Mr. Portman's book, which, under the modest title of *Notes*, forms a large octavo volume of nearly 600 pages, but with a peculiar arrangement and pagination, the convenience of which is not obvious. Thus there are first of all eight chapters, which are consecutively paged up to p. 188, and deal somewhat thoroughly with the peculiar features of the language, with special reference to the views of Mr. Man and Colonel Temple on this subject; with the tribal divisions and sub-divisions of the natives; with the structure of the sentence illustrated by analytical notes and translations from the Gospel of Saint Matthew; with Andamanese myths, legends, songs, and folklore, these subjects being also illustrated with original texts, copious explanatory notes, and even variants of the same legend in three or four different dialects.

Then follows another series of eight chapters, which are also consecutively paged up to p. 391, but are entirely devoted to an exceedingly valuable analysis of a comparative vocabulary of about 2,300 words in English, and the five chief dialects of the South Andamanese group. This vocabulary, however, is separately paged from 1 up to 191, thus completing the volume, which with preface makes, as stated, nearly 600

pages altogether. If, therefore, a double pagination was needed, it should obviously have begun with Chapter IX, and run on continuously with the vocabulary, with which Chapters IX to XVI are exclusively connected. But the inconvenience is not so great as might be supposed, because English is the first of the six lexical columns, and is fortunately arranged without break from A to Z, and not disposed in a number of exasperating sections—nouns, adjectives, verbs, etc., as is too often the case with such collections. I have in my possession a vocabulary of an eastern language, in which the words are ingeniously broken up into sixteen distinct groups, on some abstruse psychological principle which I have never yet been able to fathom.

But where the material brought together is of such excellent quality, a somewhat defective arrangement may well be overlooked. How valuable to students of the evolution of language are the chapters occupied with the analysis of the vocabulary one example will suffice to show. In the vocabulary the English preposition "above" is rendered in the chief dialect *táng len*, which in the analysis (p. 190) is explained to mean literally "in the roof," because "the Andamanese puts his property away by sticking it in the thatched roof of his hut." Thus the concrete expression "in the roof" has acquired a purely relational force, and from hundreds of such instances we see how true it is that all the familiar elements of speech must have originally been notional terms.

But the chief interest of this language, constituting it an order of speech, one might say, absolutely *sui generis*, lies in its twofold development of prefixed and postfixed particles, thus combining within itself the essential characters of two distinct types of agglutination, as represented, for instance, in the Ural-Altaic postfix and the Bantu prefix systems. The result is an exuberance of relational elements, which, like the tangled vegetation of tropical woodlands, actually interfere with each other's grammatical functions. About the nature of the postfixes there is no difficulty, all agreeing that they are of the same normal character as those of other postfixing groups, and differ from the typical Mongolo-Turki only in the total exclusion of vocalic harmony. But so varied and subtle are the uses of the numerous prefixes, that opinions well may differ respecting their true character. Mr. Man and Colonel Temple appear to regard them all as of one category—pronominal determinatives—whereas Mr. Portman plainly shows that their function is twofold, qualitative inasmuch as they modify the meaning of the roots and thus classify them, and strictly grammatical, either possessive pronouns or indicative of gender. But on this point he speaks somewhat doubtfully, remarking that "it appears to me that one of the functions of the prefixes is to indicate gender, not in the sense of male and female, but in the sense of classifying the Andamanese roots into genera or groups." Then he adds: "In order to modify its meaning, a root may have two or even three prefixes, one of which is probably a gender prefix. The system by which the roots are classified into genera is not known, and the opinions of individual Andamanese on the subject are only of value as showing the mode of thought of the people" (p. 81).

It is remarkable that, with all this wealth of formative particles, the numerals are limited, as in the Australian and many New Guinea languages, to *one* and *two*. *Three* really means "one more"; *four* "some more," and *five* "all"; and here their arithmetic may be said to stop altogether. In some groups, however, *six* or *seven*, or perhaps even *ten*, may be reached by the aid of the nose and fingers. First the nose is tapped with the little finger of either hand to score *one*, then with the next finger for *two*, and so on up to *five*, each successive tap being accompanied with the word *anka*, "and this." The process is then continued with the second hand, after which both hands are joined together to indicate $5 + 5$, the score being clenched with the

word *ārdūru*, "all." But few get as far as this, and the process usually breaks down at six or seven.

While indispensable to the student of language, Mr. Portman's book will also be prized by the folk-lorist for the specimens it gives of the Andamanese myths and legends. Several variants are given, all at first hand, of the curious fire-legend, in which *Pūluga*, head of the native pantheon, plays a part singularly inconsistent with the idea of a Supreme Being current amongst less primitive peoples.

A. H. KEANE.

THE DOLMENS AND BURIAL MOUNDS IN JAPAN. By William Gowland, Esq., F.S.A., etc., *Archæologia*, vol. lv, pp. 439-524 (1897).

THE DOLMENS OF JAPAN AND THEIR BUILDERS. By W. Gowland, Assoc. R.S.M., F.C.S., F.S.A., *Trans. and Proc. Japan Society*, vol. iv, Part III (1899).

In these two papers we have a clear and well-illustrated account of the Dolmens of Japan by Mr. Gowland, late of the Imperial Japanese Mint. While they have much in common, they are by no means identical as regards either the letterpress or the illustrations, though alike in general treatment and conclusions.

The author remarks that he uses the term "dolmen" in its broad or generic sense to signify "a stone burial-chamber, generally of rude megalithic structure, larger than a cist, and whether covered by a mound or not." They are numerous in Japan, where he has "carefully examined 406 and made drawings of or measured 140." Simple mounds preceded the dolmens. Burial in chambers hewn out of rock was also largely practised by the early Japanese. But standing-stones, either single as "menhirs" or in "avenues" or "circles" have not been discovered in Japan.

The simple burial mounds have been mostly destroyed either "by the hand of time or in reclaiming land for agriculture." The remains found in them consist generally of stone beads and ornaments with swords and arrowheads of bronze. No stone weapons or implements have (in Mr. Gowland's experience) been found in these ancient burial mounds, the evidence tending to show that the Japanese had passed out of the Stone Ages before they migrated from the mainland, and were, when in Japan, in the last stages of their Bronze Age.

A map in the paper from *Archæologia* illustrates the distribution of Burial Mounds, Dolmens and Rock-Hewn Tombs in Japan. We learn that they occur chiefly "in the basins of the greater rivers, on the margins of the more important plains, and near the coasts of the inland and Japan Seas." From their distribution the author thinks that during the dolmen-building period the extreme north-east and some of the wilder tracts of the interior were still held by the Ainu aborigines: this view being confirmed by the increasing numbers of aboriginal stone weapons found as we proceed towards the northern extremity of the island. The situations in which dolmens are usually found are "the lower flanks of a mountain range, and the crests and slopes of the lower hills and upland tracts which bound the plains; sites commanding extensive views being preferred."

The author divides the Japanese dolmens into "four great typical classes according to the general form or plan of their interiors, beginning with the most simple and ending with the most highly differentiated structures." He then gives accounts, illustrated by plans, sections, etc., of examples of these classes and of the weapons, ornaments, etc., discovered in them. No well or even moderately preserved skeleton (he says) has yet been found in any dolmen, owing to the damp atmosphere and free infiltration of water; and this is true even of those in which there is a sarcophagus.

As to the period to which they belong, he remarks that "the dolmens are certainly all of the Iron Age." No bronze swords have ever been found in them, though bronze arrowheads associated with iron swords are said to occur occasionally. And as iron was known in China as early as the year 1000 B.C., and as there was communication between China and Japan at least as early as the year 265 B.C., Mr. Gowland thinks the beginning of the Iron Age in Japan may date from about the last-named year; and that shortly after dolmens began to be built. And he states that the total abolition of burial in dolmens was decreed by the Emperor Mommu (697-707 A.D.) and cremation introduced about the same time.

There is no evidence that the dolmen builders had any metallic currency, and no indication that they possessed a knowledge of writing. As to their religious belief:—

"The arms and armour, the ornaments, and the vessels for food and drink, show conclusively that there was a belief in a future state of existence for the dead, not widely different from that they had left behind, and in which they required all those things which they had been accustomed to use in their life on this side of the tomb. The sacrifice of retainers and the subsequent substitution for them of terra-cotta images also bears out this view."

T. V. H.

ETHNOLOGY, in two parts. By A. H. Keane, F.R.G.S., 2nd edition, Cambridge, 1896.
"Man, Past and Present." By the same author. Cambridge, 1899.

In these two volumes, the work of Professor Keane, we have at last a comprehensive treatise on the Science of Man, which may safely be placed in the hands of English students of Anthropology. The existing English literature of the subject includes pre-Darwinian books, such as those by Dr. Prichard, Messrs. Nott and Gliddon, and Dr. Latham. Since then English scholars, such as Professors Huxley, Tylor, and Boyd Dawkins, Mr. Darwin, Sir John Evans, Sir John Lubbock, and many writers in the *Journal of the Anthropological Institute*, have made important contributions to the knowledge and evolution of Early Man. But while continental writers have provided many valuable works of a comprehensive character, the English student has hitherto possessed no standard treatise of the subject as a whole, except the *Anthropology* of Dr. Tylor and Dr. Brinton's *Races and Peoples*, both admirable works, but of a less comprehensive range than Professor Keane's Manuals.

The new Cambridge Geographical Series thus supplies an obvious want. The author is one of the most learned members of the modern English Anthropological school. His range of reading in the highways and byways of Ethnological literature is immense; his manuals are brightly written, well arranged and excellently illustrated.

The treatise on Ethnology consists of two parts—the first dealing with those fundamental problems which affect the human family as a whole; the second discussing the several main branches of Mankind. In "Man, Past and Present," the range is wider and the author discusses in detail the origin and inter-relations of the main groups of the Hominoidea, and attempts to bridge the gulf between the past and present of the Human Race.

It is, of course, impossible to review in detail the vast amount of information thus brought to bear upon the physical and psychical development of Man. Mr. Keane is naturally a follower of the evolutionary school; he dismisses the theory of a special creation and concludes that man has been developed from a Pliocene ancestor. He is not "descended" from the gorilla, the chimpanzee, or some other member of the Simiadæ, his nearest congeners; but his ascent is referred to some long extinct

generalised form, from which the other branches also sprung along independent lines. Specially deserving of study in the treatise on ethnology are his views on the evolution of neolithic megalithic architecture, the relations of race to language, the ethnological problems of Australia and Tasmania, the Stone Age and the local independent evolution of culture in America.

In "Man, Past and Present" the reader will specially direct his attention to the admirable discussion of the inter-relation of the Caucasian peoples along the shores of the Mediterranean, the distribution of the Mongoloid races and the ethnological problems of India—the relations of the Aryan and Dravidian culture and the origin of the modern Rājputs and Jāts. Some attention is also devoted to the coincidence of the folklore and mythology of distant races, in regard to which he strongly advocates the view that where actual contact and outward influences are excluded by considerations of time and space, this identity is a proof of the common psychic nature of Man. The question which he raises of the dependence of early taboos on the regulation of the food supply deserves more detailed treatment than the author is able to bestow upon it. On the great marriage question he discards all theories based upon promiscuity and so-called "Communal Marriage." Unfortunately, the great work of Messrs. Spencer and Gillen on *The Native Tribes of Central Australia* was published after the completion of these books. We may expect to find the important results arrived at by these writers in connection with marriage and Totemism utilised in a future edition.

Professor Keane will add to the obligations of English readers by the publication of his Ethnographical Atlas, of which we are glad to welcome the announcement. Meanwhile he has completed a work which will be of the greatest value to students, and which should be in the hands of the many explorers in the ranks of the navy, army, and civil services engaged in the administration of our Indian and Colonial Empire.

The science of Ethnology abounds in problems which have been the battle-ground of various schools. It would be too much to expect that all experts on the multitudinous questions with which he deals will agree in Professor Keane's conclusions. But the writer of a text-book must have the courage of his own convictions, and if such a manual is to be of any real value, it must express definite views, while a complete statement of opposing theories is out of the question. At any rate, the author has everywhere, by his copious references to the best authorities, made it possible for any reader to test the evidence for himself.

W. CROOKE.

DER PERIPLUS DES HANNO. Von Dr. Karl Emil Illing. Separately printed from the *Programm des Wettiner Gymnasiums*. Dresden, 1899, No. 566. (Printed by the Rammingsche Buckdruckerei.) 8vo. pp. 49.

This is a learned and compendious discussion of the principal questions raised by the *Periplus*. It includes separate sections on the Date of Hanno, which Dr. Illing places (against Meltzer) between 450 B.C. and 287 B.C., but finds no valid evidence by which to define more closely; on the Pillars of Hercules, which (against C. T. Fischer) he regards as the well-known geographical promontories, not the votive columns at Gades; on the length of the Day's Journey in the *Periplus*, which he regards with Vivien de St. Martin as very inferior in value to the topographical indications; on the Voyage of Colonisation, in which he sums up the results of modern geographical and ethnological research bearing on the places and tribes mentioned as

far as Kerne; on the *Voyage of Discovery* beyond Kerne, where he takes the θεῶν ὄχημα for the modern *Mongo ma Loba* ("Mountain of the Gods"), the highest peak of the Cameroons, and the Νότου κέρας for the neighbourhood of Corisco Bay; and finally on the "Gorillas," whom he regards with some probability, not as apes, but as members of a hairy pygmy race of men, taking κρημνοβάται = "good climbers" like the pygmies seen by Emin Pasha; and proposing the very ingenious emendation πτεροῖς ἀμυνόμενοι, "defending themselves with feathered arrows" (as the pygmies actually do), in place of the meaningless μετρίοις of the MS., or the pointless correction πέτροις which is found in most of the editions of the *Periplus*.

J. L. M.

BIRD GODS. By Charles de Kay. London: Allenson, 1898.

This is an attempt to prove that much of the mythology of Europe and elsewhere is based on the cult of birds. The author has collected a considerable amount of curious information, but he gives no references to his authorities, and his conclusions are not likely to meet acceptance by sober students of mythology.

W. CROOKE.

AUTHORITY AND ARCHAEOLOGY, SACRED AND PROFANE. Essays on the Relation of Monuments to Biblical and Classical Literature, by S. R. Driver, D.D., E. A. Gardner, M.A., F. L. L. Griffith, M.A., F. Haverfield, M.A., A. C. Headlam, M.A., D. G. Hogarth, M.A. Edited by D. G. Hogarth. London: Murray, 1899. 8vo. pp. xvi, 440.

This useful volume is an attempt to express in a small compass the changes which have been necessitated in our view of the historical authority of Hebrew, Greek, and Latin literature by the exploration and excavation of Classical and Biblical lands and sites. The editor, who is well known as a "Wandering Scholar in the Levant," and as the Director of the British School of Archaeology in Athens, introduces the question by a short discussion of the scope of archaeology, and of the lines along which archaeological evidence has proved, and may still be expected to prove, a valuable touchstone and corrective of literary tradition.

The essays which follow are by different hands. Professor Driver treats of *Hebrew Authority* in Part I, dealing first with the subject matter of the Pentateuch, and then with the history of the Jewish Kingdom and of the Exile; to this are appended a very full collection of parallels to Biblical phrases and customs derived from epigraphic and other sources, and a most judicious estimate of the present position of Old Testament criticism, with special reference to the so-called "conflict" between the archaeological and linguistic schools, of which so much has been made by the opponents of any sort of criticism at all. Professor Driver has little difficulty in making his contention clear that the alleged cases of divergence are based on misapprehension or misrepresentation of the conclusions either of the archaeologists, or of the philologists, or, quite frequently, of both.

In Part III, *Christian Authority*, or the value, as history, of the documents of the New Testament, is examined by Rev. A. C. Headlam in the same cautious and thorough-going manner. The principal subjects of discussion are, naturally, first the results of the recent discoveries of early papyrus documents in Egypt—small enough it is true, but most suggestive, and, for the circumstances of the first age of Christianity, most instructive; next, the conclusions which may be drawn from the Christian or

quasi-Christian inscriptions—mostly epitaphs—discovered in certain districts of Phrygia by Professor W. M. Ramsay and other travellers; and thirdly, the revised interpretation which the first really thorough examination of the Catacombs, or the first systematic collation of the multitude of inscriptions in them, has permitted, of the half legendary history of the beginnings of the Christian Church in Rome.

Part II, interpolated as it were between the Old and the New Testament, but chronologically in its proper position with regard to both of them, sums up the present state of "profane" archæology in its bearings upon the literature and history of Greece and Rome. This part naturally covers a wider and less homogeneous field, and suffers the more, in that the main positions were here for the most part much earlier won, so that the recent contributions to our knowledge have been much more of the nature of detailed corroboration or correction than in regard to the history of the Jewish action or of the Christian Church.

The section entitled "Egypt and Assyria" is little more than a detailed criticism of the writings of Herodotus in the light of modern research. Mr. Griffith is admirably qualified by his close study of the Egyptian and Assyrian versions of the events, personages, and customs which are in question, to produce a thorough and most compendious commentary on all the passages where Herodotus is definitely wrong, or where his testimony has been called in question. But we think that he has prejudiced his own case by insisting too exclusively on this side of the matter, and by following too closely the method once popularised by Professor Sayce of assuming Herodotus to be wilfully wrong, except when he can be proved to be accidentally right. No one now-a-days goes to Herodotus, as many still do go to "Homer" or to "Moses" for first hand information about early Egypt or the order of natural phenomena. But from the educational point of view, which is now all-important, Herodotus, like some other ancient authorities, is in the best sense "written for our learning"; and it is as useless—and as easy—to pour ridicule on the "Father of History" for bad zoology or ignorance of hieroglyphics, as to attack the "Father of Science" on the ground of alchemy or misrepresentations of Aristotle in the *Novum Organum*. Students won't get any good out of a writer who is always being held up to them as an inaccurate ignoramus and plagiarist; but they *will* go far out of their way to make the best of him if they are left to discover that he was doing his best, and in fact better than the best of his age. It is after all to Herodotus himself in the long run that Mr. Griffith owes the discovery of the difference between hearsay and eyewitness—between Authority, in fact, and Archæology.

Mr. Hogarth's own article on pre-historic Greece gives a fair, though not very full account of the extraordinary advances which the last few years have seen in our knowledge of that part of the Mediterranean in which Aryan—and through it European—civilisation took its rise. But his eclectic attitude is not always quite definite or clear—that perhaps is still really out of the question—and he has suffered somewhat from his attempt to popularise, without the help of illustrations, a rather complex group of hypotheses in which almost every step depends upon the comparison of artistic styles. Professor Ernest Gardner has had an easy task, in summarising the principal excavations of the last twenty years on the greater sites of Greek antiquity, and has illustrated, as fully as his limits permit, the enormous change which has come over the whole cycle of Greek classical studies as the result of them.

Finally Mr. Haverfield's sketch of Italian archæology is slighter and more superficial than we should have expected from so learned an authority. True, the whole subject is less advanced, and has hitherto proved less fertile in brilliant and unexpected discoveries than the exploration of Greece; while the most valuable results

from Roman history have been gained for the most part by a minute classification of epigraphic formulae, which does not lend itself to popular treatment; but we would gladly have had more—even if it was only of "private interpretation"—on the eternal problem of the validity, actual or symbolic—of the "authority" preserved to us by Livy and Polybius, which deal with the beginnings of the Eternal City, and its peculiarly complex civilisation. But this and other omissions elsewhere which were perhaps necessary if the book was to be kept within the limits of a single volume, might well be amended, if in a second edition, which will doubtless be required before long, "Sacred" and "Profane" Authority could be accommodated with separate covers—and with a less egregious title.

J. L. M.

THE KINGDOM OF THE BAROTSI, UPPER ZAMBESIA. By Alfred Bertrand. Translated by A. D. Miall. London: Fisher Unwin, 1899.

The author gives us in the form of a diary an account of an adventurous exploration of a little known region in Africa. The map and illustrations are admirable, and the book contains here and there interesting notes on ethnology. The first appendix, in particular, which contains a summary of the sociology and customs of the Barotsi, deserves attention.

W. CROOKE.

THE RACES OF EUROPE. By William Z. Ripley, Ph.D. New York: D. Appleton and Co. Accompanied by a Supplementary Bibliography of the Anthropology and Ethnology of Europe, published by the Public Library of the City of Boston.

This is a magnificent contribution to the ethnology of Europe, and it is no exaggeration to say that its effect upon all sciences dealing with the race problems of Europe will be epoch-making. Professor Ripley has with indefatigable labour collected all available statistics of the physical characteristics of the races of Europe, and few will have an adequate idea of how much accurate work has been done by the anthropologists of Europe till they read this volume. But not only has the raw material been collected, it has been thoroughly analysed in the light of the latest views of anthropology; and the whole subject has been expounded in a lucid and picturesque style which will make it equally delightful reading to the general reader and the professional anthropologist. The maps are a special feature of this work. The geographical distribution of cephalic indices, pigmentation, stature and other ethnical criteria are shown for every country in Europe whenever statistics are available, and the relation of these criteria to the physical geography of the country is fully developed and expounded in the text. A very large number of typical portraits of the various races is also given.

Professor Ripley adopts the views of the modern school of anthropologists, who find among the peoples of Europe three principal race types, namely, the tall blond, dolichocephalic Teutonic race in the north; the dark, dolichocephalic Iberian or Mediterranean race in the south; and the brown, brachycephalic Alpine race in middle Europe. He also favours the view that the Teutonic type may be a variety of the Mediterranean, which has acquired its special characteristics by the long continued action of climate and selection. These views at present hold the field among European anthropologists, but, as Ripley himself points, there are many abnormal racial phenomena in Europe which this theory altogether fails to account

for. For example, the tall dark populations of the Balkan States and the tall dark people of the western highlands of Scotland represent combinations of physical characteristics which agree with neither of the three leading types of the orthodox school of anthropologists. That the study of such apparent anomalies will, in the near future, probably lead to a modification of the present views, is already indicated by the remarkable work of Deniker.

After dealing with Europe in general, Ripley devotes separate chapters to France and Belgium, the Basques, the Teutonic race, the Mediterranean race, the Alpine race, the British Isles, Russia and the Slavs, the Jews and Semites, Eastern Europe, and Western Asia. It is surprising how many cherished beliefs are demolished by a perusal of these chapters. For instance, many even who are *au fait* in the latest ethnological literature, will be surprised to learn that the Basques are not a pure representative of the Iberian race, but a mixture of a broad and a long headed race; that the true Finns are by race allied to the blond dolichocephalic Teuton and not to the dark brachycephalic Lapp; that the Turk is not Mongolian; and that no such type as the *Homo Caucasicus* exists in the region from which Blumenbach derived this name for the typical European.

The data collected by Professor Ripley bear every mark of careful ascertainment, and I believe that the utmost reliance can be placed on their accuracy. I do not share, however, his faith in the cephalic index as a test of race. He himself confesses that it fails in the British Isles, where the greatest uniformity prevails as to cephalic index, alongside of the greatest diversity of pigmentation. Boas, Macalister and other leading anthropologists have recently expressed disbelief in the cephalic index as the characteristic function of head measurements. There can be no doubt that the faith in this ratio has often been the cause of the failure to publish the absolute measurements of the head. Livi's magnificent volume on military anthropometry, for instance, does not contain any absolute dimensions of the head—only cephalic indices. If the cephalic index should be discredited by future investigation, the value of such work as Livi's will be greatly vitiated.

Ripley concludes his work with chapters on European origins, social problems, and acclimatization. The last chapter should be of great interest to a colonizing people like ourselves. The effect of change of environment on different races is fully discussed and some remarkable points brought out which have an important bearing on the future struggle of races for the possession of the earth.

The bibliography drawn up by Professor Ripley appears to be most exhaustive, and will be invaluable to students of European ethnology. His system of references to this, in his greater work by means of dates, is ingenious, and when once understood, very useful.

J. G.

THE CULT OF OTHIN. An Essay in the Ancient Religion of the North.

By H. M. Chadwick. London : C. J. Clay and Sons, 1899.

The controversy aroused by Professor Bugge and other scholars, who think with him on the origin of many of the northern myths, shows no sign of abatement. Mr. Chadwick's contribution is an attempt to answer three questions: 1. What were the characteristics of the cult of Odin in the north? 2. Is it approximately identical with that of the ancient (continental) Germans, or has it undergone substantial modifications in the north? 3. When was the cult introduced into the north?

It will be seen that his main theme is rather the worship than the myths of

Odin; but the interdependence of myth and ritual is now so completely recognised that it is no longer possible to discuss the one apart from the other.

The book is divided into three chapters, the first of which discusses the cult chiefly as revealed in sacrifice. In connection with this, the author examines the famous passage in the *Hávamál* upon which Professor Bugge so much relies. This was dealt with, but not in a very satisfactory manner, two or three years ago by Mr. Eiríkr Magnússon in his paper on "Odin's Horse, Yggdrasill," read before the Cambridge Philological Society. Mr. Chadwick rightly holds that the strophes 138 and 139 reflect primarily the sacrificial rite. He challenges, however, the assumption by Bugge and Golther that the sacrifice imputed to Odin was a self-sacrifice. Odin, he holds, is both the person sacrificed and the person to whom the sacrifice is offered, but there is no indication that the sacrifice was a self-sacrifice, and if not, the inference of Christian influence is unwarranted.

The traces of the cult of Odin on the Continent and in Britain are few; but I think Mr. Chadwick is right that (at least on the Continent) both sacrificial and funeral rites are to be found which can best be explained by reference to Odin-worship. Perhaps this may also apply to certain practices in warfare. Some of the references to England, however, seem more doubtful. The entry in the Saxon Chronicle, for instance, of the capture of Anderida, which relates that "all who dwelt therein were slaughtered" is a very sandy foundation for an inference that the conquered had been devoted by Ælle and Cissa, the conquerors, to Woden. The explanation of Coifi's desecration of the heathen temple by casting his spear into it, as recorded by Bede, is questionable too.

The problem of the date of introduction of the cult into Scandinavia is one of considerable difficulty. Having regard to the funeral rites ascribed in the *Ynglinga Saga* to Odin, Mr. Chadwick conjectures that cremation was an integral part of the cult. Now, cremation, it appears, was introduced into the north shortly before the end of the Bronze Age. This is placed by Montelius about B.C. 500. But Odin-worship was essentially that of a warlike people. Tacitus's account of the Swedes (if they are to be identified, as seems probable, with the Suiones) presents them as an essentially peaceful nation. The cult of Odin, therefore, cannot have been known to them before about 50 A.D., the approximate date of the historian's information. If, then, cremation were an essential part of the Odinic rites, Montelius's chronology must be challenged as placing the end of the Bronze Age too far back. This Mr. Chadwick proceeds to do, and comes to the conclusion that the Iron Age proper had not begun in Sweden before the third century A.D., and that the cult of Odin can hardly have been introduced into Sweden later than the end of the first century. He holds that the cult was a foreign one, but whence introduced he does not suggest. From the fact that Odin is described as essentially a god of the nobility, it would appear that his worship was that of a conquering caste,—Thor being the god (or one of the gods) of the people who were subdued. If these conclusions be correct, there is no room for the supposition that the principal myths relating to Odin have been seriously influenced by Christianity.

The northern mythology and worship seem to have been an amalgam of many creeds. The problems they raise are numerous and important. Mr. Chadwick has in this little book only dealt with a few of them; but, short as his monograph is, it is a real contribution to our knowledge of a subject full of interest for scientific enquirers into the history of Religion, as well as for those whose special business is with the history of the civilization and religion of the north.

E. SIDNEY HARTLAND.

THE NEGRITOS. By A. B. Meyer, M.D. Dresden: Stengel and Co., 1899.

This is a translation by Miss C. S. Fox of two chapters from the author's work on the Negritos of the Philippine Islands. It is a review of the chief authorities on the existence of the Negrito race in the Philippine Islands, Borneo, Java, Sumatra, the Andamans and Nicobar, India and Australia, and New Guinea. The general result is to show that the existing evidence is incomplete and unsatisfactory, and that much further inquiry is needed before the question of the ethnology of this part of the world can be finally settled.

W. CROOKE.

THE TEMPLE OF MUT IN ASHER. An account of the excavations of the temple and of the religious representations and objects found therein as illustrating the history of Egypt and the main religious ideas of the Egyptians. By Miss Margaret Benson and Miss Janet Gourlay. London: John Murray, 1899.

This is the result of three years' diggings in the Temple of Mut, near Karnak, undertaken by these two enterprising and energetic ladies, who may be said to be the first women who have had permission granted them by the Egyptian Government to make excavations on any site in Egypt, for which they are deserving of all praise as they appear to have conducted it very carefully.

In the course of the work they discovered some highly interesting statues and monuments, many very fragmentary. The most notable are those of Sen-Mut, the architect of the Temple of Dér el Bahari, favourite and Chief Steward of the celebrated Queen Hatshepsut of the XVIIIth Dynasty; the statue of Mentu-em-hat, and the remarkable heads of the woman of the Saïtic period and the so-called Philistine.

The book is highly interesting and well got up, illustrated with photographs and plans. It is decidedly worth reading, although the shortness of the actual description of excavations is somewhat disappointing. The work contains several chapters upon the religion and history of Egypt during the period the Temple of Mut was flourishing, and is supplemented by a chapter by Mr. Percy Newberry, describing and translating the inscriptions from the monuments discovered.

F. G. H. P.

THE PHILIPPINE ISLANDS; a political, geographical, ethnographical, social and commercial history of the Philippine Archipelago and its political dependencies, embracing the whole period of Spanish Rule. By John Foreman, F.R.G.S. 2nd Edition. London: Sampson Low, Marston and Co., 1899.

This is a most elaborate account of a portion of the world which recent events render particularly interesting. It is well illustrated and supplied with an excellent map. It will long remain the standard account of the Spanish Dependencies in Eastern Asia. Mr. Foreman's account of the native races is disappointing, and in particular he has done little to throw light on the Negrito peoples.

W. CROOKE.

AMONG THE WILD NGONI. By Dr. W. A. Elmslie. Edinburgh and London: Oliphant Anderson and Ferrier, 1899.

This book serves a double purpose; it gives an account of the founding of several stations of the Livingstonia Mission in the northern part of British Central Africa, and at the same time briefly describes the natives themselves, their customs and

beliefs. The book is the more valuable from the length of time the author has worked in the district. Among the sections of greatest interest to the anthropologist is perhaps the history of the Ngoni pieced together from various native narratives. The author traces the reflux wave of the Zulu-Xosa group of Abantu from the borders of Natal. Driven before the victorious arms of Chaka they retired northward in several streams at short intervals of time, and founded warlike communities on the Zulu model, such as the Matabele in Mashonaland, the Ngoni to the west, and the Magwangwara to the east of Lake Nyasa and the Watuta, who reached as far as the Victoria Nyanza.

A fuller account than had previously been published in popular form is given of the native war dances, the *itshanusi* or medicine men, and the poison ordeal by drinking *muave*. It is to be hoped Dr. Elmslie will at some other time supply a fuller record of Ngoni customs, beliefs, and medical practice than was practicable in the limits of this book.

F. C. S.

VOCABULARY OF THE GUALLUMA TRIBE INHABITING THE PLAINS BETWEEN THE YULE AND FORTESCUE RIVERS, NORTH-WEST AUSTRALIA.

The following vocabulary, prepared by Mr. E. Clement, of an Australian tribe hardly if at all known from a philological point of view, is interesting. It may be hoped that before this language becomes extinct, the rules of inflexions and syntax, hardly touched on in the present paper, will be worked out. In the meantime it is to be noticed that words related to those of other Australian tribes at vast distances are to be found in the present vocabulary, connecting the Gualluma with other members of the Australian family of languages.

E. B. TYLOR.

Numerals :—

- 1, *Cūnjērië* ("j" is pronounced as in English "jam").
- 2, *Cūdārră* ("a" pronounced as in "America").
- 3, *Bürgō* ("u" pronounced as in "full").
- 4, *Cudarra-cudarra*.
- 5, *Cudarra-cudarra-cunjerie*.
- 6, *Māngā* (plenty) or *Mārră* (plenty).
- 7,
- 8, } *Manga* or *Marru* ("u" pronounced as "oo" in "cool").
- 9, etc.

On the Upper Sherlock River I frequently heard *burgo-burgo* for 6, but not elsewhere.

Comparison :—

The comparison is formed by placing *mahma*, *more*, before the adjective as :

wābā, good.

mahma waba, better.

cūngēră, high ("g" pronounced as in English "gate").

mahma cungera, higher.

There is no superlative.

Genders, none.

Cases, none.

naidyu, I, me, my ("ai" pronounced as "ai" in English "aisle," "yu" pronounced as in English "you").

naidyu walgai, I go (present).

naidyu bällalye walgai, I went (perfect).

I before go.

("YE" in *ballalye* is pronounced as "ju" in the German "judus," only shorter.)
naidyu munti walgai baiacca, I shall go to-morrow (future).

I sure go to-morrow.

naidyu munti buccundi, I am hungry.

I true hungry.

("i" in *munti* and *buccundi* pronounced as "i" in English "knit.")
naidyu ballalye buccundi, I was hungry.

I before hungry.

naidyu coboya wérégō.

my son or boy ill.

("ya" in *coboya* is pronounced as the German "jer," only shorter.)

naidyu coboya ballalye werego.

my boy before ill.

Baiacca Willinbung walgai takelgo maiacca, Willinbung is going to get married.
fem. name

to-morrow Willinbung go get man.

There are no words for greetings. Distances are reckoned by pointing to sun or moon.

eumbäi, hot.

mötö, cold.

mahma eumbai, summer.

mahma mötö, winter.

njinda, you.

naligoru, we, all.

taili, tongue (the final "i" pronounced as "i" in "knit").

muta, nose ("u" as "u" in "full").

bola, head.

murra, finger.

bai, arm ("ai" pronounced as "ai" in "aisle").

yendi, forehead.

era, tooth ("e" pronounced as "e" in "debt").

weära, leg ("ea" pronounced like "e" in English "we").

mambru, knee ("u" pronounced like "oo" in soon).

bulewake, thigh.

koruka, ear.

tola, eye.

ñjari, eyelashes.

parela, shoulder.

naki, neck.

karaki, collarbone.

kina, foot (the "i" pronounced like "ee" in "feet").

noruka, ankle ("u" pronounced as the "oo" in English "tool").

earka, fingernail ("ear" pronounced like "ear" in English).

cadarra, vein.

murra, blood.

coboya, boy.

mirga, girl.

kjandi, cough.

nimai, Java sparrow.

bäbä, water.

bañama bäba, still or standing water.

wimbai bäba, running water.

manga or *marru*, plenty.

cobodja, little.

murriandi, quick.

murrawarra, quick.

ngami, slow.

bähmbä, to sleep.

warri, flies.

cuming, mosquitoes.	potcarry, hill kangaroo.
tangurra, emu.	walloo, snake.
wangalli, lizard.	bavangera, big lizard.
mundu, stone.	yandaga or arang, sand.
corada, stick.	
tandi, branch ("i" pronounced like "i" in English "knit").	
gnalu, stomach ("u" pronounced like "oo" in "too").	
nielu, navel.	mirrawai, married woman, wife.
gnara, husband.	njundi, dead.
palam, long time.	
taura, fish ("au" pronounced like "ou" in "proud").	
waiki, to swim.	
molori, to dive ("i" pronounced as "ee" in "feel").	
tarko } tree.	culcara, hair.
parga } stars.	wongulla, elbow.
currong, yanda, parverri, sun.	willera, moon.
binderi } stars.	tura, wind.
gnogo } stars.	yongo, rain.
narguai, to eat.	bandelgo, to smell.
pehna, woodborer.	
puree, sea ("ee" pronounced like "ee" in "feel").	
cundarra, hunting spear.	
magundu, fighting spear ("u" pronounced like "oo" in "tool").	
panigo, to dance.	eromagai, to shout, to call.
cundigo, tired, stop.	njurra, camp.
tamarra, fire-wood.	cabraki, to bring, fetch.
murr, red.	yinda, black.
warruhma, ants.	wandi, male organ.
mendi, female organ.	
beri, breast ("v" pronounced as in Latin "vita").	
ti, parents.	canerang, sister.
combinumarra, brother.	
gnairo, to throw ("ai" pronounced as the "ai" in "aisle").	
co ai } come here.	pangarri, go away.
cuckai }	mirga or mandiwanga, tall.
cobodya, little.	candera, clouds.
gutawanna, beetle.	tamera, to roast.
nauwai, to see, to look.	
walliwiddi, lightning. (Pronounced very rapidly, a beautiful word, I think.)	
yindarra, thunder.	waruga } devil, evil spirit.
parni, to sit.	warunga }
carri, to get up.	tama, to make fire.
mejagai, to drink.	cumbai, hot.
moto, cold.	wimbai, to run.
togai, to throw.	carakai, to spear downwards.
ngari, to lie down.	pani, to lie down.
cundarri, a duck.	currungullu, heart.
tambi, ribs.	morro, backbone.
kaun or cabul, skin.	wandi or njanda, tail.
carramarri, to fight.	mundu, stone, hill.

<i>tina</i> , track.	<i>minnawango</i> , centipede.
<i>pideda</i> , white cockatoo.	<i>billago</i> , red-breasted cockatoo.
<i>wandiali cuckai</i> , where do you come from?	
<i>māmā</i> , father.	<i>nanga</i> , mother.
<i>jimbu</i> , nest.	<i>kimbu</i> , eggs.
<i>wallaguru</i> , feathers.	<i>perigalgu</i> , claw of kangaroo.
<i>mangallah</i> , bird-claw.	<i>mangangarri</i> , to hop.
<i>canaliwalli</i> , butterfly.	<i>candi</i> or <i>borulla</i> , stone knife.
<i>mangula</i> , child.	<i>maia</i> , humpy or bush house.
<i>burruru</i> , hair belt.	
<i>ginda</i> , charcoal ("gin" pronounced like "gin" in English).	
<i>djuno</i> , enemy (pronounced like "juno").	
<i>mungurru</i> , kangaroo.	<i>Muira</i> , Australia.
<i>diagalma</i> , to open.	<i>njudigalma</i> , to kill.
<i>cadulgu</i> , to spear.	<i>cangarra walgi</i> , to fly.
<i>bijagu</i> , to bite	literally : top walking.
<i>dagalgu</i> , to catch.	<i>ginder</i> , salt.
<i>werego</i> , sick.	<i>ēēba</i> , ashes.
<i>wanangurra</i> , whirlwind.	<i>calga</i> , roots.
<i>peebun</i> , Sturt's desert pea.	<i>gnarrangnarra</i> , netting needle.
<i>marben</i> , passport.	<i>mida</i> , no.
<i>coohu</i> , yes (better spelled perhaps <i>cuuhu</i>).	<i>mida bulbi</i> , I don't want it.
<i>yongurru naidyu</i> , give it to me.	<i>mida waiya</i> , don't be afraid.
<i>ngani muna</i> , how far?	<i>nungo</i> , strong.
far now.	
<i>naidyu mida waiya</i> , I am not afraid.	

Male names.

Williamarra.
Ginderubangu.
Ginabi.
Yani.
Kadjieringa.
Currabu.
Williwilliringo.
**Cunyin*.
**Tollabong*.
Nilirengo.
**Mudgira*.

Female names.

Wimeringo.
Murga.
Mindiyangu.
Yerabangu.
**Cadji*.

* I could only ascertain the meanings of these four names:—

<i>Cunyan</i> , one who is asleep.	<i>Tollabong</i> , sharp eye.
<i>Mudgira</i> , wild dog.	<i>Cadji</i> , little spear.
<i>Ginderubangu</i> , has no doubt something to do with salt.	

The children of the tribe become either—

Balliery.
Curramurrang.
Burong ("u" pronounced like the French "u").
or *Banniker*.

According to their parents, thus :—

<i>Balliery</i> father	}	child is <i>Banniker</i> .
<i>Curramurrang</i> mother		
<i>Curramurrang</i> father	}	child is <i>Burong</i> .
<i>Balliery</i> mother		
<i>Burong</i> father	}	child is <i>Curramurrang</i>
<i>Banniker</i> mother		
<i>Banniker</i> father	}	child is <i>Balliery</i> .
<i>Burong</i> mother		

Second generation :—

<i>Balliery</i> father	}	child is <i>Burong</i> .
<i>Curramurrang</i> mother		
<i>Curramurrang</i> father	}	child is <i>Banniker</i> .
<i>Balliery</i> mother		
<i>Burong</i> father	}	child is <i>Banniker</i> .
<i>Curramurrang</i> mother		
<i>Curramurrang</i> father	}	child is <i>Balliery</i> .
<i>Burong</i> mother		

etc., etc.

I have never been able to find the origin or meaning of these four names, but will try again on my next journey in that district.

CENTRALBLATT FÜR ANTHROPOLOGIE, ETHNOLOGIE UND URGESCHICHTE.

Edited by Dr. G. Buschan.

It is with much pleasure that we call the attention of our readers to the above excellent journal, which has now reached its fourth year of publication under the distinguished editorship of Dr. Buschan. It is published in quarterly parts, each of which contains an original article on some subject of general anthropological interest of from three to four pages in length. This is followed by a series of abstracts of some of the more important anthropological monographs of recent publication in different countries, followed by similar abstracts of papers on Ethnology and Primitive History. A short section is next devoted to the news of the day in anthropology, and finally a list of the various papers published on the subjects embraced in the title of the *Centralblatt* in the current literature of the year. Such a publication appearing every quarter is of great importance to anthropologists and greatly facilitates their researches. In the first place it is a useful index of what is being done in various parts of the world, while in the second place the short abstracts of more important papers indicates their scope; thus enabling an author, when preparing a paper on any subject, in a few minutes to find out whether there is anything appearing in the scope of his work which it is necessary for him to examine and refer to. When work has to be done at high pressure, this is a most valuable saving of time and trouble, likewise when the author is removed from easy access to the various libraries and scientific periodicals it is a great matter to be able to get such a list of references classified to hand. We hope therefore that our Fellows may not be slow to avail themselves of so valuable a help, and become subscribers for it, as it deserves every encouragement of anthropologists, and is thoroughly international in character.

J. G. G.

EAGLEHAWK AND CROW. A Study of the Australian Aborigines; including an Inquiry into their Origin and a Survey of Australian Languages. By John Mathew, M.A., B.D. London: David Nutt, 270-271, Strand. Melbourne: Mullen and Slade. 1899.

The Rev. John Mathew, the author of this work, is the writer of the paper on Australian Cave Paintings which appears in the *Journal of the Anthropological Institute*, vol. xxiii (1893). The title *Eaglehawk and Crow* is explained in some of the earlier pages of the book, where the author reviews some myths widely spread among the aborigines in which either the eaglehawk or the crow, or both, figure as names given to tribes or divisions of tribes. He inclines to think that "the eaglehawk and crow represent two races of men which once contested for the possession of Australia, the taller, more powerful and more fierce 'eaglehawk' race overcoming and in places exterminating the weaker, more scantily equipped sable 'crows.'" He believes that the aborigines of Australia were Papuan and that they were the ancestors of the now extinct Tasmanians. But he also thinks that there is evidence of a Dravidian element which accounts for certain resemblances between Dravidian and Australian languages, and of a third and later Malay element. To the last-named race he is confident that the best Australian cave paintings are due, also the introduction of circumcision in the north.

The physical characters, dwellings, clothing, implements, food, government, laws, institutions, customs, ceremonies, art, superstitions and religion of the various tribes are discussed. Mr. Mathew thinks that the linguistic evidence points to the conclusion that the migration of the aborigines was "from the north-east, south-eastward on the east coast, southward, south-westward and westward elsewhere." Much space is devoted to the characteristics of the languages spoken by the aborigines, both as regards their structure and affinities and the local variations in the terms most in common use. Indeed, linguistic evidence occupies about half of the whole book, and constitutes the leading feature of Mr. Mathew's latest contribution to our knowledge of things Australian.

T. V. H.

NEW EDITION OF "NOTES AND QUERIES ON ANTHROPOLOGY."

By the time this *Journal* is in the hands of our readers, the third edition of *Notes and Queries on Anthropology* will have appeared. This work is now so well known to anthropologists and has proved itself of so much value to travellers and others as a guide to anthropological research that it is almost unnecessary to more than mention a few facts regarding it. A new edition has been rendered necessary by the second edition having become exhausted in less than half the time required for the distribution of the first edition. The third edition, like the previous, has been produced under the editorship of Dr. J. G. Garson and Mr. Charles H. Read, who have taken the opportunity of having the various sections thoroughly revised and in some instances rewritten. Although a good deal of new matter has been added, the size of the book has not been materially increased, the text of this edition being only ten pages more than that of the former edition. Several new illustrations have been added to the first part of the work which deals with anthropography or, as it is sometimes inappropriately termed, the physical characters of man. This part of the work also shows most changes in its revision. The instruments for taking measurements with have been improved and modified in the directions which experience has shown to be desirable. A description has been given of the photographic outfit required for taking anthropological portraits, with directions for its use, and added to the general

section on photography, which has been entirely rewritten. Modifications have been made in the directions given for recording various observations with a view to making them more precise and more readily understood. In the instances where advancing knowledge has modified or altered the views previously held, or shown that other observations are required, the sections so affected have been rearranged to meet the requirements of the subjects of which they treat.

By arrangement with the British Association for the Advancement of Science, under whose auspices the work has been produced, the Anthropological Institute will be responsible for the publication and distribution of the new edition. To the Secretary of the Institute, 3, Hanover Square, London, W., should be addressed all orders for it, accompanied by a remittance of 5s. per copy, except in the case of members of the British Association and of the Anthropological Institute, to whom it will be issued on personal application at the above address at the reduced price of 3s. 6d.

J. G. G.

ANTHROPOLOGY AT THE BRITISH ASSOCIATION. Dover Meeting: September 13th to 20th, 1899.

The Anthropological Section met at Dover, in the Rifle Volunteer Hall, and was fairly well attended, considering the small scale of the Dover Meeting. Forty-one papers and reports were presented, many of which were of more than average value.

The results of the Dover Meeting again indicate the necessity of more careful revision of papers presented, with a view to check diffusiveness and illogical argument on facts, the accuracy of which it is the duty of the officers of the Section to check. In future it will be incumbent on the Secretaries to enforce the rule of the Association, which requires that all papers be submitted on or before the first day of August to permit of the needful revision.

Readers of papers may also be reminded that the effect of many communications is impaired by the inaudible utterance of readers and speakers. The room at Dover was exposed to interruption from outside, but it would have been possible to obviate this by more attention to distinctness of delivery.

The President's address will be found printed in full in the *Proceedings of the British Association* (Dover, 1899), and in *Nature*, October, 1899, No. 1562. In the summary of the work of the Section which follows, a full abstract is given of those papers and reports only which are not immediately to be published *in extenso*. In all other cases a reference is given to the Journal or periodical in which the full text of the paper will be found. The papers are classified below in the order of their subject matter.

ORGANISATION AND METHOD.

FINGER PRINTS.

HENRY.

Mr. E. R. Henry, C.S.I., described his System of classifying Finger Prints as evidence in identification. He referred to the importance of fixing human personality so that no efforts made to confuse it subsequently may prove availing. Finger prints, error in transcribing or recording, the "Personal Equation" error is reduced to a minimum. Taking the impressions of all ten digits occupies only a fraction of the time required for measuring, while search is more exhaustive and many times more rapid. This new system has been introduced on a most extensive scale throughout British India, where the postal, survey, registration, medical, pensions, emigration, police, opium, and other great departments have adopted it, and the Legislature has recognised it by passing, with the strong approval of all representative bodies consulted,

being absolute impressions taken from the body under conditions which eliminate an Act to amend the Law of Evidence so as to make relevant the testimony of finger print experts.

The main difficulty hitherto experienced had been that of providing an effective system of classification. But this difficulty has now been overcome.

Mr. Henry's paper will be printed in full in this *Journal*.

A committee of the British Association has been appointed to inquire into this method of identification by finger prints: *Chairman, Mr. Francis Galton; Secretary, Mr. G. L. Gomme.* It should report to the Bradford Meeting in 1900.

FINGER PRINTS.**GALTON.**

Mr. Francis Galton, F.R.S., read the following paper on the "Finger Prints of Young Children":—

At the time when I published my book on *Finger Prints*, and subsequent works on the same subject, no material existed for determining the age at which the patterns of the ridges on the fingers and their numerous details became first established. The ridges were known to be traceable in some degree long before birth, but it was not known whether they had acquired, even in early childhood, that strange complexity of distribution which I showed to be permanent from youth upwards. The wish to complete my work by investigating this interesting physiological point was sharpened by a request for an opinion on the following case. The police authorities in — (I will not say what country) received information that a baby, who was heir to a great title and estate, might be kidnapped for the sake of extorting ransom. Such cases have occurred in history, and it is needless to insist on the miserable doubts and legal difficulties that would arise if a stolen infant should be restored after the lapse of some time without satisfactory identification. I was asked whether prints of the fingers of a baby would serve for ever afterwards to identify him, and to prove that he was not a changeling.

An American lady—Mrs. John Gardiner, of Boulder, Colorado—kindly volunteered to collect finger prints of infants for me. The following remarks are confined to those of her own child Dorothy, whose fingers she printed every day after that of her birth for a short time, then less frequently, and afterwards yearly, the child being now $4\frac{1}{2}$ years old. By selecting the best of the numerous specimens of the earlier dates, I compiled three sets of all the ten fingers. In the first set the age of the child lay between 9 days and a month. In the second, between 1 month and 6 weeks; in the third, between 5 and 7 months. In addition, I have a fourth set taken at 17 months, a fifth at $2\frac{1}{2}$ years, and a sixth at $4\frac{1}{2}$ years.

It is easy to those who have learnt the art, and who have the necessary materials, to print with sharpness the fingers of children who have attained six years of age or upwards; but it is exceedingly difficult to print the fingers of babies. Far more delicate printing is needed on account of the low relief of the ridges and the minuteness of the pattern. At the same time, babies are most difficult to deal with, the persistent closing of their fists being not the least of the difficulties. The result is that many undecipherable blurs are made before one moderate success is attained, and, at the best, the print is made by a mere dab of the finger, rolled impressions being practically impossible. Consequently the first four sets are all more or less blotted, and none show more than a small part of that surface which it is desirable to print.

The fifth and sixth sets are clear though pale, for it was necessary to spread the ink very thinly to avoid blots; otherwise they are perfectly suited for comparisons. The

two sets agree in every detail, and show the same order of complexity that is found in the ridges of adult persons; so, subject to the possibility of some minute after-change, I should infer that the print of a child's fingers at the age of $2\frac{1}{2}$ years would serve to identify him ever after. It will be interesting after the lapse of some years to ascertain whether this is the case with Miss Dorothy Gardiner.

The first four sets are much more difficult to deal with. I have scrutinised them, and compared them several times with the last two sets and with one another, and my conclusions are as follows:—

(1) The type of the pattern is never doubtful to a practised eye. To an unpractised eye the result of a slight twist of the finger at the moment of printing, which gives a specious air of circularity, might convey the false impression of a whorl to what was really an arch or a loop. (2) The character of the core is defined within narrow limits, but not always accurately. Thus, in one instance, the core of a loop in the $2\frac{1}{2}$ and $4\frac{1}{2}$ year sets was a clear "staple." At 17 months the staple was connected to the curve next above it by a small isthmus; in babyhood the staple and the ridge were joined—whether by a blot or in reality I cannot say. (3) A similar absence of distinction between ridges that are afterwards clearly separated is often found near the V point. It is thus impossible to count the number of ridges with accuracy that lie between the core and the V, and the entry has often to take such a form at $9 + ?$ the ? proving to be any number between one and perhaps eight ridges. It is, however, a great point to be assured that the real number is *not less* than 9. (4) The doubt (as I pointed out in my book) which is always attached to the exact way in which a new ridge arises is greatly increased in these prints. No weight should be assigned to the character of the junction or ending, but only to the fact that somehow a new ridge has become interpolated.

The study of these prints is an excellent discipline in the art of decipherment. I have counted sixty-eight details in the prints of these ten fingers that can be identified throughout all six sets, unless obliterated in some one of them by a blot. In the majority of cases the identity is unquestionable; in the others it may be trusted within narrow limits. I have, therefore, little doubt that the prints of all ten fingers of a baby, if taken as clearly as those I have dealt with, would suffice for after-identification by an expert, but by an expert only.

It should be added that I have had as yet no opportunity of taking finger prints from infants who are two or even more months younger than babies ordinarily are at the time of their births—I mean such as are now successfully reared in warmed glass cases. These premature infants are passive, and in that respect easy to deal with, but they are tiny creatures who require great tenderness in handling. I think that the impressions most likely to succeed would be those that their greasy fingers might leave on a highly polished metal plate, to be afterwards photographed under suitable illumination.

GENEALOGICAL STATISTICS.

Under the title "Two New Departures in Anthropological Method," Dr. W. H. R. Rivers described his procedure in collecting, social and vital statistics by means of genealogies during the Cambridge Expedition to Torres States (*vide* below).

RIVERS.

In Murray Island and in Mabuiag, genealogies going back for three to five generations were compiled, which included nearly all the present inhabitants of those islands. In working out the genealogies, the only terms of relationship used were *father*, *mother*, *child*, *husband*, and *wife*; and care was taken to limit them to their English sense. The trustworthiness of the genealogies was guaranteed by the fact

that nearly every detail was derived from two or more sources. It was found that these genealogies afford material for the exact study of numerous sociological questions. Thus the system of kinship can be worked out very thoroughly by finding the native terms which any individual applies to the other members of his family; so that the subject can be investigated entirely by concrete examples, and abstract terms of relationship derived from European sources entirely avoided. The genealogies also provide a large amount of material for the study of totemism, marriage customs, naming customs, etc. By this method also vital statistics can be collected of the past as well as of the present. The genealogies collected in Torres Straits supply dates for the study of the size of families, the proportion of the sexes, the fertility of mixed marriages, etc. The method has the further advantage of bringing out incidentally many facts in the recent history of the people, and of giving insight into their views on various subjects. It is also eminently adapted to bring one into sympathy and friendly relations with natives.

A small amount of work on these lines was also done with natives of Tanna and Lifu living on Mabuiag: enough was done to show that the method is readily applicable to other Melanesian populations, and it is hoped that it may be found to be capable of wide application.

[The other "new departure" described by Dr. Rivers is the method of determining skin colour, summarised below under that heading.]

PERSONAL EQUATION.**GARSON.**

Dr. J. G. Garson discussed the limits of Personal Equation which are admissible in current systems of anthropometric identification.

PHOTOGRAPHS.**BRIT. ASS. COMMITTEE.**

A Committee was appointed by the British Association for the Advancement of Science in September, 1898, to provide for the "Collection, Preservation, and Systematic Registration of Photographs of Anthropological Interest."

A similar Committee on Geological Photographs was appointed in 1889, and has organised the valuable collection preserved in the Museum of Practical Geology. The Royal Geographical Society has gradually collected a large number of geographical photographs, many of which are also of anthropological interest. More recently the Hellenic Society has announced a large special collection for the use of students of the topography, civilisation, and art of Greece; and the Anthropological Institute possesses a considerable collection of photographs, which have been lately mounted and classified, and has permitted the registration of these in the list of the new Anthropological Photographs Committee.

The considerations which led to the appointment of this Committee are briefly as follows:—

(1) A very large number of anthropological phenomena can only be studied in the field, or by means of accurate reproductions; but the latter are in many cases difficult to procure, except where typical examples have been regularly published; and even then it is frequently of advantage to be able to acquire separate copies of single plates or illustrations, for purposes of comparison, without breaking up a collection or a volume.

(2) On the other hand, most travellers, collectors and museum officials find it necessary to make many photographic negatives in the course of their own work, for which they themselves have no further use, but which they would gladly make accessible to other students, if any scheme existed by which this could be done

without trouble to themselves. Such negatives also accumulate, and take up valuable space, and are very liable to damage through neglect.

(3) Further, though many professional photographers in remote parts of the world have made admirable use of their opportunities of recording native types, customs, and handiwork, there has hitherto existed no single record of what has been done in this direction, with the result that valuable collections have remained practically inaccessible to those in whose interest they have been made. In the case of the Hellenic Society, already cited, the inclusion, in the reference collection, of selected prints from the negatives of professional photographers abroad has been found to be of great advantage to teachers and students, who consult it with the view of choosing the best representations to add to their own series.

What appears therefore to be required is, in the first place, a register of the photographic negatives which can be made generally available, illustrated by a permanent print from each, preserved at an accessible centre; together with an arrangement by which properly qualified students may be enabled to have duplicate prints made from them for their own use, at a reasonable price. In any such scheme it is understood that the copyright, for purposes of publication, remains with the owner of the negative, and that all duplicate prints distributed under this arrangement are subject to that qualification.

In establishing such a Register and Collection of Anthropological Photographs, the Committee invites the co-operation of all owners of suitable photographic negatives, who are requested to submit for registration one unmounted print from each negative (which will be mounted by the Committee and preserved either at the office of the British Association, or in some central and accessible place), together with a full description of the photograph. The latter should state—

(1) The subject of the photograph, and the place where the original subject is (or was) to be found, the date when the photograph was taken, and name of the person who took the photograph.

(2) The name and address of the owner of the negative.

(3) The whereabouts of the negative itself: i.e., whether it is retained by the owner at his own address, or deposited with a professional photographer at an address named, or with the Committee.

(4) The terms on which prints, enlargements, and lantern slides will be supplied when ordered through the Committee.

The Committee has made arrangements for the storage and insurance of any negatives which may be deposited on loan; and for the production of prints and lantern slides from them to order; and a number of negatives have already been so deposited.

The Secretary of the Committee, Mr. J. L. Myres, Christ Church, Oxford, will be glad to supply forms for the registration of negatives, and any further information which may be required.

The Committee has been reappointed for the year 1898-9, with a small grant for the purpose of mounting the photographs already given or promised; and it is hoped that it may be possible to publish a first list of photographs in the next report.

ANTHROPOMETRY.

EGYPT.

MACIVER.

Mr. D. MacIver, B.A., gave examples of the ways in which anthropometry may aid archæological investigation, and pointed out the unusually favourable conditions for such anthropometrical work which exist in Egypt. He gave a summary of the

series of Egyptian measurements at present available, of the difficulties which have arisen in their interpretation, and of some new methods of publishing measurements specially designed to meet them. Details were given of three important series of specimens from Egypt, viz. :

- (1) Prehistoric Series ; from the excavations of 1898-9.
- (2) VI. to XII. Dynasties ; from the excavations of 1898.
- (3) XII. to XVI. or XVII. Dynasties ; from the excavations of 1898-9.

These series were considered (*a*) separately, with the object of ascertaining the race type represented in each; (*b*) in comparison with one another, to show their affinities and differences. The paper concluded with a note on the light which such comparison throws on Egyptian history.

[To be published in full in this *Journal*.]

EGYPT.**MACALISTER.**

Professor A. Macalister, M.D., F.R.S., commented on the measurements of 1,000 Egyptian Crania.

MORIORI.**MACALISTER.**

Professor A. Macalister, M.D., F.R.S., exhibited an example of an anomalous atlanto-occipital joint in a Moriori skull.

NEW HEBRIDES.**MACALISTER.**

Professor A. Macalister, M.D., F.R.S., exhibited an example of a pre-basioccipital bone in a New Hebridean skull.

SCHOOL CHILDREN : ABNORMAL.**BRIT. ASS. COMMITTEE.**

The Committee "On the Mental and Physical Deviations from the Normal of Children in Public Elementary and other Schools" was appointed in 1893, at the suggestion of the late Sir Douglas Galton, and has worked in conjunction with the Childhood Society.

The Fifth Report (1897) contained a catalogue of 1,120 exceptional children (597 boys; 523 girls), forming about 1 per cent. of the children in public elementary schools. These 1,120 cases were arranged in primary groups showing the class of defect indicated: namely, A. Developmental Defect; B. Abnormal Nerve-signs; C. Low Nutrition; D. Mental Dulness.

In the Sixth Report (1898), the correlation of classes of defects in these children was shown to be very high. They have a much greater tendency than average children to become delicate in an adverse environment, especially the girls. This, as might be expected, is most marked in those under seven years of age.

In this Seventh Report (to be printed in full in the *Proceedings* for 1899), the same children are arranged in a table arranged to show the proportion of primary groups, showing only one class of defect, to the compound groups in which the other classes of defect are present together with the primary symptom.

The defects shown thus suggest the need of management and care in training stage by stage, with the object of improving each phase of mental ability, and removing individual disabilities.

The Committee has been reappointed, with the addition of Dr. W. H. R. Rivers, and with a small grant to carry out further statistical inquiries.

SKIN-COLOUR.

RIVERS.

Dr. W. H. R. Rivers, described the methods employed during the Cambridge Expedition in Torres Straits, to determine the colour of the skin quantitatively. Numerous records were taken with Lovibond's Tintometer, and these were fairly satisfactory, although the dark skins of the natives were found to be difficult objects to match exactly.

More satisfactory matches were made with the colour-top; but the latter method is open to the objection that the coloured paper discs used on the top are liable to fade, while the glasses used in the Tintometer have the advantage of being constant. Records were taken of the colour of various Melanesians and Polynesians, as well as of the two races of Torres Straits. The following match of the skin of the *Mamus* or chief of Murray Island is given as an example of the colour-top results.

Orange	...	...	...	...	...	...	...	15°
Yellow	...	...	...	...	...	...	...	6°
White	...	...	...	...	...	...	...	7°
Black	...	...	...	...	...	...	...	332°
								360°

ARCHEOLOGY.

ALPHABET.

FLINDERS PETRIE.

[WITH PLATE XXVIII.]

Professor W. M. Flinders Petrie presented a *résumé* of recent investigations into the sources of the alphabet, as follows:—

About ten years ago there were first noticed signs upon Egyptian pottery of 1400 and 2500 B.C., which were closely like those of the Greek alphabet. I ventured on a supposition that they were an early stage of the alphabet; but, rather than allow of the existence of an alphabet before 800 B.C., most scholars tried to believe that these signs were derived from Egyptian hieroglyphics.

The next year this same system of signs was much further disclosed, and I could draw up a list of 120 signs, mostly in use as early as 2500 B.C. And here the subject rested for some years.

When about five years ago the prehistoric age of about 5000 B.C. in Egypt began to be disclosed, again we found a large number of marks upon the pottery, many of them identical with those already known to be some two or three thousand years later. As the hieroglyphic system was not yet in the land, this discovery removed these signs altogether from the possibility of being degraded hieroglyphics.

Then a year or two ago Mr. Arthur Evans showed the existence of a system of signs in Crete, which are largely like those already found in Egypt.

The next step is the collation of the longer editions of the Greek alphabet with these signs. In the Karian and Celt-iberian alphabets or syllabaries we have no less than 43 values in place of the 26 preserved in the Greek alphabet; and these 43 values are represented by about 60 different signs. Many of them are therefore of the same value, but they probably represent different forms gradually reduced to equal values. Hitherto it has probably been thought that these barbarous Greek alphabets deserve no special attention. But when so far apart as Karian and Spain we find close similarity in the forms, and many connections with the Italic as well as Greek alphabets, it becomes at least an open question if we are not in presence of an earlier and more extensive alphabet or syllabary. To avoid the defining whether

EGYPTIAN					KRETAN	KARIAN	SPANISH
PRE-HIST	EARLY	XII	XVIII	ROMAN	2000 BC	600 BC	300 BC
R		AAA B E		A B		AAA B E	A A R
H		B H	B H		B H H		H H
H	□ △	□ □	□ □	□		□ □ △	
O	O	O	♀			O	O
Y Y V	Y Y V	Y Y V	Y Y Y			Y Y V	Y Y V
Φ Φ	Φ Φ	Φ Φ				Φ Φ	Φ Φ
F	△	△			F	△	△
H	⊖	⊖			H	⊖	N
H	⊖	⊖			H	⊖	
K	K	K			K	K	K
L	L	L			L	L	L
M	M	M			M	M	M
N	N N	N N			N	N	N
P	† † P	† † P			P	P P	P P
S	S	S			S	S	S
T	T	T			T	T	T
X	+ + X	+ X X			X	+ X +	X
V	V V	V V			V	V V	V
W	W W	W W			W	W W	W
Z	- Z -	- Z -			Z	- Z -	Z



these signs represent a single letter or a syllable it may be best to speak of them for the present as a *signary*, or collection of signs.

On comparing then this signary with that found in Egypt no less than 44 of the 60 signs are known there. If we further extend the Mediterranean signary by the signs found in Crete, we find 56 signs in use both in the Mediterranean and in Egypt.

It is not too much therefore to say that we are in presence of a widely-spread and long-lasting system of signs, or signary, common to the Mediterranean from Spain to Egypt.

In what way can we understand this and connect it with what is otherwise known of the history of the alphabet? I venture to give an outline of what may be tested as a working theory to connect all these facts together.

As early as 5000 B.C., some trade existed around the Mediterranean, as proved by imports into Egypt. At that time the signary was beginning its course, some 40 signs already having been found of that age; and these signs are likely therefore to have been carried from land to land. The firm position of a similar signary in Syria and Arabia points to its being established there before the rise of the powerful hieroglyph system of Egypt. That system seems to have been thrust in, and so to have divided the Arabian and Mediterranean branches of the signary, which were later divided also by Hittite hieroglyphs and Babylonian cuneiform.

The signary continued to amplify and develop, held together a good deal by intercourse, but with much variation in different lands. By 2500 B.C. it contained over a hundred signs in its Egyptian form, and over thirty signs are already known in the Cretan form.

The great systematising force which gave it a unity unknown before was the application of these signs as numerals by the Phoenicians; nine were appropriated to the units, nine to the tens, and nine to the hundreds. This system was entirely Oriental, and even in late times of coinage it was scarcely ever used in Europe. But once having been adopted by the leading commercial nation the systemised order became enforced on all the Mediterranean. The other signs which did not form part of it dropped into the background; and we only have some twenty or thirty of them surviving in the less civilised regions of Karia and Spain. This view exactly explains the otherwise puzzling phenomena of the early Greek alphabets. There is seen the most rigorous order of letters, and yet in most of the letters great confusion as to the forms. The pre-existing signaries in the various lands and tribes did not easily fall into line, when the numerical basis of order sprung into use, and it took some centuries for them to become unified. How impossible this would be on the old view that all Greece took over a compact and complete alphabet ready formed by the Phoenicians!

We stand therefore now in an entirely new position as to the sources of the alphabet, and we see them to be about thrice as old as had been supposed. That the signs were used for written communications of spelled-out words in the early stages, or as an alphabet, is far from probable. It was a body of signs, with more or less generally understood meanings; and the change of attributing a single letter value to each, and only using signs for sounds to be built into words, is apparently a relatively late outcome of the systematising due to Phoenician commerce.

This notice is by no means an account of the subject, nor does it profess to give the evidence. As yet we need far more material and research before the true meaning is seen. But this is only a bulletin to report the accumulation of intractable facts, and to show what is the most likely connection between them.

Table of Signaries.

This table shows five periods of the Egyptian signary, (1) prehistoric, (2) the early dynastic, (3) the XIIth dynasty, (4) the XVIIIth dynasty, and (5) Roman collected by the writer. The Kretan signary is that collected by Mr. Arthur Evans. The Karian is that collected by Professor Sayce. The Spanish is the well known Celtiberian alphabet of inscriptions. Only those Egyptian and Kretan signs are shown which seem related to the Karin and Spanish alphabets; there are about twice as many signs found in Egypt, which survive only in Krete, or seem to have been lost altogether in the West. The values given are only those of the Karian and Spanish; no values are known for the Egyptian and Kretan signs independently of this comparison. Some of these signs appear also in the Cypriote and Libyan alphabets; but they have much less connection as a whole with the Egyptian, and as the values here are different from those in Cyprus and Libya it is safest to rely only on the fuller signaries of Karia and Spain.

COPPER CELTS: IRELAND.

COFFEY.

Mr. George Coffey presented analyses of Copper Celts, which, though rare compared with those of bronze, have been found in considerable numbers in Ireland. Thirty specimens are described or mentioned in the Catalogue of the Museum of the Royal Irish Academy, published in 1861. The Academy's Collection (now in the National Museum, Dublin) at present numbers eighty-two examples.

Copper celts are not confined to any particular district: examples are recorded from the counties of Donegal, Londonderry, Antrim, Cavan, Mayo, Galway, Louth, Tipperary, Waterford, Cork—localities embracing the extreme north and south, and east and west of the island.

One specimen was analysed by J. W. Mallet in 1853: it gave copper, 98·74; tin, 1·09, *Trans. R.I.A.*, vol. xxii.

During the present year Mr. J. Holmes Pollok, Royal College of Science, Dublin, kindly analysed for me eight additional specimens as follows:—

—	London-derry.	—	Cork.	Galway.	Tyrone.	—	Water-ford.	—
Reference...	W. 3	W. 17	1881/136	1874/38	1897/112	1896/7	W. 10	1875/20
Density ...	8·833	8·698	8·430	8·749	8·862	8·811	8·987	8·705
Copper ...	98·43	96·75	98·71	97·68	97·25	97·17	96·46	98·24
Arsenic ...	·76	1·35	·18	·76	1·56	1·86	Trace	·13
Tin ...	Trace	·50	·10	·79	·51	·27	·05	·83
Silver ...	·25	·14	·13	·18	·25	·11	—	·07
Lead ...	·05	·46	·07	—	·17	·17	2·74	·12
Zinc ...	—	—	—	·44	—	—	—	—
Nickel ...	—	—	—	—	—	—	·21	—
Iron ...	—	·07	—	—	·10	—	·25	—
Total ...	99·49	99·27	99·21	99·85	99·84	99·58	99·71	99·39

The above analyses are fairly in line with analyses of copper celts from other parts of Europe, with the exception of W. 10. This celt is one of the best finished

copper celts in the collection ; the metal is, however, very soft and hardly serviceable. It is remarkable for the almost total absence of tin (0·05) and the high percentage of lead (2·74). There is not evidence to show whether the presence of the lead is intentional or accidental. It was found at Tramore, county Waterford, a rich copper district. Numerous lodes of copper and lead are exposed in the cliffs of this locality, and extensive remains of ancient workings have been found in a promontory near Tramore.

The classification of the copper celts by metal is confirmed by type divisions. The copper celts are invariably of the plain flat type, without ornament, and in no instance showing even rudimentary stop ridges. Ten specimens closely resemble common forms of Irish small stone celts. Some of these might be regarded as ingots, but in four instances they have been ground to an edge for use. The examples of developed metal form are in general ruder and heavier than bronze celts. In some cases the rough surface marks of casting have not been removed, but in many instances these celts show traces of having been rubbed down over the body of the celt, after the manner of stone celts. Celts of the developed copper form can be classified under two main types.

1. More or less V-shaped ; flare of cutting edge wide compared with length of celt, leading to plain bronze celt of type (Evans, Fig. 28, and Wilde, Fig. 247).

2. Cutting edge narrow compared with length, and in some instances nearly semicircular ; sides more or less parallel, leading to long, slender, plain bronze celt of type (Evans, Fig. 33). In several instances types 1 and 2 cross. In both types the butt end, in the majority of examples, is thick and squared off, showing a quadrangular section. As the types approach those of the bronze celts a thinning off of the butt end is noticeable.

The copper celts appear, therefore, to represent, apart from metal, a transition from stone to bronze types, and can be arranged in series showing development of form from stone to bronze.

From the preceding facts it would appear reasonable to conclude that, prior to a knowledge of bronze, copper was known and used for cutting implements in Ireland.

This statement is supported by a find of three copper celts, a copper tanged knife and three copper awls, all found together at Kilbannon, county Galway (Academy Collection). One of the celts is included in the eight analysed by Mr. Pollock, 1874 : 38. All these objects seem to be copper, and agree most closely in the appearance of the metal, as if made from the same piece. The awls are of early type, pointed at both ends and without shoulders, and the knife also appears to be of an early type.

In the discussion which followed :—

Sir John Evans laid stress on the importance of these analyses which bear out the evidence of the forms of the implements, though paucity of tin does not in itself prove that an implement is of a period intermediate between Stone and Bronze Age. Such implements of unalloyed copper (which are peculiarly frequent in Ireland) are found to have been cast in open single-valve moulds, and that their cutting has been renewed by hammering, with the result that the edge is found expanded laterally, and even recurved into volutes.

FIBULÆ: NORTH AFRICA.**EVANS.**

Mr. Arthur J. Evans, M.A., F.S.A., pointed out the importance of the "Occurrence of 'Celtic' Types of Fibula of the Hallstatt and La Tène Periods in Tunisia and Eastern Algeria."

In the course of a recent journey through Tunisia and Eastern Algeria, the

author found repeated evidence that a form of "Late Celtic" fibula, answering to a well-known "Middle La Tène" type of continental archæologists, was in use among the ancient Numidians. Three examples of this were described; two from near Constantine (the ancient *Cirta*), and one from a dolmen near El-Kef (*Sicca Venerea*). The author traced the origin of this type in the lands about the head of the Adriatic, and its subsequent diffusion on European soil. Attention was called to the new materials for the chronology of this and other allied forms, supplied by Bianchetti's excavations in the Gaulish cemeteries of Ornavasso near the Lago Maggiore, where a large series of tombs were approximately dated by the presence of coins.

The author also described some examples of earlier fibulae found at Carthage, and in a dolmen near Guyotville in Algeria. Two of the forms are parallel to those found in the early cemetery of Fusco near Syracuse, and may have been due to the same Corinthian influence which during the sixth, seventh, and eighth centuries seems to have been predominant at Carthage itself. Another Carthaginian fibula is identical with a Hallstatt type, and is the prototype of the "crossbow" form so widely distributed throughout the north, when it gave birth to a long succession of derivative forms reaching down in Gothland and elsewhere to mediæval times. In the case of both the earlier and later African examples there is thus an indication pointing to the ancient course of the amber trade by the Adriatic coast. The appearance of Celtic types of fibula among the Numidians finds its complement in the discovery of large hoards of Carthaginian and Numidian coins on the transit line of this commerce between the Save and the Adriatic. Attention was further called to the appearance of "Late Celtic" forms of Fibula in the Carthaginian Dominion of Western Sicily.

In the discussion which followed:—

M. Paul Pallary, of Eckmühl, Oran, laid stress upon the wide range of influence of the Hallstatt civilisation, and also on the historical continuity of Berber civilisation down to, and beyond, the Roman conquest of N. Africa. He inquired whether any other part of the tomb furniture of the dolmen near El-kef had been preserved. Mr. Evans replied that no record remained of anything but the fibula.

M. Bosteaux-Paris, Mayor of Cernay-les-Reims, commented upon the types of fibulae shown by Mr. Evans, in relation to the types which are characteristic of the Haute Marne area.

M. E. Fourdrignier, of the French Commission of Megalithic Monuments, emphasised the distinct character of the *type Marnienne*, which is different from, and prior to, that of the civilisation of La Tène; and is marked by the presence of objects of coral, by the use of chariots, and by the absence still of coined money. He suggested an ultimately Scandinavian origin for the whole group of civilisations under discussion.

LAKE VILLAGE : GLASTONBURY.

BRIT. ASS. COMMITTEE.

The portion of the site excavated in 1899 is situated in the centre and on the west side of the village, and includes dwelling mounds and the ground round them. One of these mounds (P P) contained no less than ten superimposed hearths, together with a floor of rushes, some well-preserved hurdle-work, a finely turned wheel-spoke, and a whole wheel cut from the solid, and 15 inches in diameter. Another mound (E E) contained a human skull, and a number of sling-pellets of baked clay; and another (C C) had peculiar depressions excavated in the floor, and lined with baked clay.

To the report are appended the analyses, by Dr. J. H. Gladstone, of a number of metallic objects, including a bronze unusually rich in tin, and a sceptre-like object of pure tin, gilded and furnished with bronze finials.

Mr. C. W. Andrews adds a note on the species of birds identified from bones found at Glastonbury.

SILCHESTER.

BRIT. ASS. COMMITTEE.

The excavations at Silchester in 1898 were begun on May 2 and continued, with the usual interval during the harvest, until November 26.

Operations were confined to an area of about eight acres in the south-west corner of the city.

This area is bounded on the north by *insulae XV and XVI*; on the east by *insulae XVII and XVIII*, excavated in 1897; and on the other sides by the city wall. It contained two *insulae* (XIX and XX), together with a large triangular area to the south, forming apparently part of *insula XVIII*. See the plan in last year's report.

Insula XIX presents the peculiarity of being inclosed by a wall, and contains, in addition to three minor buildings, a well-planned house of early date and of the largest size, with fine hypocausts. To it is attached the workshop of some industry, with a large inclosure dependent on it, containing two settling-tanks, perhaps belonging to a tannery. The courtyard of this house is partly underlaid by the remains of a much earlier one, of half-timbered construction, containing in one of its chambers a mosaic pavement of remarkable design, and perhaps the earliest in date yet found in this country. A small house in this *insula* is somewhat exceptional in plan and also, perhaps, of early date.

Insula XX contains a number of buildings scattered over its area, but none of these appears to be of any importance. Two of them are of interest as furnishing plans of houses of the smallest class. This *insula* also contains one of the curious detached hypocausts which were noticed in the excavations of 1897. A large inclosure with attached chambers, nearer the lesser west gate, may be conjectured to have contained stabling for the accommodation of travellers entering the city.

Several wells were found in both *insulae*, lined either with the usual wooden framing or disused barrels. A pit in *insula XX* contained a double row of pointed wooden stakes driven into the bottom, and may have been for the capture of wild animals at some period anterior to the existence of the Roman town, or subsequent to its extinction. No architectural remains were found, but the rubbish-pits yielded the usual crop of earthen vessels.

The finds in bronze and bone do not call for any special notice, but an enamelled brooch of gilt-bronze, with a curious paste intaglio and several settings of rings, may be mentioned.

Among the iron objects are a well-preserved set of hooks, perhaps for hoisting barrels, and a curious pair of handcuffs or fetterlock.

From a pit in *insula XIX* was recovered an upper quern stone, still retaining its original wooden handle.

Although a considerable area in the southern part produced no pits or traces of buildings, the *insulae* excavated are quite up to the average in point of interest, and their addition to the plan completes a very large section of the city.

A detailed account of all the discoveries was laid before the Society of Antiquaries on May 4, 1899, and will be published by the Society in *Archæologia*.

STONEHENGE.

EDDOWES.

Dr. Alfred Eddowes described some new observations and a suggestion on Stonehenge. He believes that the thirty large upright stones, with their intervals,

NEW SERIES, VOL. II, NOS. 1 AND 2.

P

indicate that the circle was divided into sixty equal parts; that the Grooved Stone was used for supporting a pole; and that the signs of wear at the mouth of the groove, together with the two worn horizontal hollows on the convex back of the stone, indicate how this pole was fixed. Such a pole would form the pointer of a sun-dial, or by the length of its shadow an indicator of the time of year.

In discussion, it was pointed out that the sun-dial theory, as commonly stated, ignored the necessity of treating Stonehenge, not as an unique monument, but in connection with the many smaller circles and other "megalithic" constructions of which the original purpose can be more easily ascertained.

STONE IMPLEMENTS : PITCAIRN ISLAND.

BROWN.

Mr. J. Allen Brown showed some fine specimens of adzes and long club-like basalt chisels ground on both sides, and of larger axe-heads, some rough chipped, others ground to a cutting edge and polished. In the discussion which followed, Dr. Hamy, Keeper of the National Museum of Ethnography in Paris, observed that in the Polynesian and Melanesian Archipelagoes, each island had its own characteristic forms, ascertainable by comparative examination. It was therefore necessary in collecting to keep these implements quite separate, so that by comparison the developments in their methods of construction could be ascertained, and also their paths of migratory progress from one island or group to another. From this standpoint the importance of the discoveries had no mathematical relation to the extent of territory in which they were found.

ETHNOGRAPHY.

AFRICA : UGANDA.

MACDONALD.

Lieutenant-Colonel J. R. L. Macdonald, R.E., presented an account of the tribes and languages observed in the course of the Juba Expedition northward from Uganda.
[It will be published in full in this *Journal*.]

AFRICA : BENUE RIVER.

POPE-HENNESSY.

Lieutenant H. Pope-Hennessy contributed notes on the Jukos and other West African tribes north of the Benue River.
[They will be published in full in this *Journal*.]

AFRICA : SOMALI, GALLA, etc.

KOETTLITZ.

Dr. R. Koettlitz exhibited a number of weapons and other objects collected by him in a recent journey through the Somali, Galla, and Shangalla country.
[They will be exhibited at the Anthropological Institute during the current session, and described in this *Journal*.]

CANADA.

BRIT. ASS. COMMITTEE.

The Committee of the Ethnographic Survey of Canada reports that during the past year their work has been extended in important directions.

A large number of schedules giving detailed directions to observers have been distributed; but it was found necessary to issue supplementary instructions respecting facial types and directions for certain measurements. Through the courtesy of Professor F. W. Putnam and Dr. F. Boas, it has been possible to make use of the excellent series of facial types employed by the Bureau of Ethnology of the World's Columbian Exposition at Chicago.

Several requests for anthropometric instruments have been received, and several observers have already forwarded extensive records of measurements.

The work of the past year is further represented by two papers appended to the Report, namely—

1. The origin of Early Canadian Settlers, by Mr. B. Sulte, Ottawa.
2. Studies of the Indians of British Columbia, by Mr. C. Hill-Tout, Vancouver, B.C.

Copies of photographs taken by Mr. Hill-Tout and by Dr. G. M. Dawson have been deposited with the British Association.

The work now in progress includes :—

(1) Customs and Traditions of the Huron Indians of Lorette, P.Q., by Mr. Leon Gerin, Ottawa. (2) Anthropometric Studies, by Dr. C. A. Hibbert, Montreal; Mr. A. F. Hunter, Batrie, Ont.; Dr. F. A. Patrick, Yorkton, N.W.T.; Dr. F. Tracey, Toronto. (3) Photographic Studies of the North-West Coast Indians, by Dr. C. F. Newcombe, Victoria, B.C. (4) Studies of the Early Settlers of Canada, by Mr. B. Sulte, Ottawa; and (5) Ethnological Studies of the Indians of British Columbia, by Mr. C. Hill-Tout.

The introduction into the North-West of large bodies of Europeans who are to become permanently incorporated in the population of the Dominion, has suggested the importance of securing, at as early a date as possible, such facts relating to their general ethnology as may seem to establish a suitable basis for the study of these people under the influence of their new environment. Satisfactory arrangements have been made with respect to the Doukhobors, and it is probable that similar arrangements may be completed during the coming year with respect to other large bodies of immigrants.

The exceptional circumstances surrounding the Indians of British Columbia; the fact that it is becoming more difficult each year to obtain reliable accounts of these people; the rapid disappearance of old customs, dress, and mode of living; and also the present availability of the services of an expert and enthusiastic observer have seemed sufficient reasons for devoting to their study a much larger share of the resources of the Committee than might otherwise appear justifiable.

NEW GUINEA AND TORRES STRAITS.

CAMBRIDGE EXPEDITION.

The principal results of the recent Cambridge Expedition to New Guinea and Torres Straits were described by Dr. A. C. Haddon and his colleagues in a series of papers which will be published in full in the Memoirs of the Expedition. A summary of the important *psychological* and *linguistic* results will be found below under their respective headings.

[*Cf.* the summary account in *Nature*, No. 1557.]

NEW GUINEA.

Mr. C. G. Seligmann presented notes on the Club Houses and *Dubus* of British New Guinea. One or more houses larger and more highly decorated than the rest called in the Gulf and Mekeo districts *elamo* and *marea* respectively, are to be seen in every village of these parts of British New Guinea. No women may enter these, they are the club houses of the men, the home of the unmarried youths, and strangers are quartered there. Each family or family group, called *itzubu* in the Mekeo district, is responsible for the upkeep of one of these. Among the Toaripi much stress is laid on the convenience and advantage of an *elamo* in keeping the young men from the

p 2

SELIGMANN.

women's quarters, and their legend of the origin of the *elamo* relates how one of their ancestors, called Meuliave, was visited by Avara Laru, who rules the north-west squalls, who bade him build a house for the unmarried youths into which no woman might come. Infringement of these rules is still met by Avara Laru destroying the *elamo*. Wooden effigies of birds and fishes are hung outside *elamos*, but these are not reverenced—the beast they represent is eaten when opportunities offer, and the family group is not called by their name. East of Delena *elamos* or *mareas* are not found, but their place is taken by the *dubu*, a platform, often two-storied, with elaborately carved corner posts and cross-pieces stretched longitudinally across the tops of these, which are hollowed to receive them. One man called *Dubu Tauna*, from each principal family of a family group (*iduhu*), looks after and is responsible for the *dubu*. The office is hereditary, not necessarily in the direct line. Women may not approach the *dubu* except on the Hood Peninsula, where once a year the girls who have become marriageable assemble on the *dubu*. The products of the garden and chase are sometimes hung on the *dubu*, which may rarely be painted red and white. Semon, *Im Australischen Busch*, p. 353, notes that he has seen skulls hung on one, but does not state where. Before fighting, warriors fully decked and armed resort to the *dubu* and there mutter the names of their ancestors. After killing a man, the successful warrior would, on his return to the village, go straight to the *dubu*, and on it eat his first meal. But little could be determined as to the meaning of the carving, the origin of the *dubus* themselves being unknown to the natives. At Qualimaruju there is a carefully excavated hollow in one of the corner posts, said to represent a bowl. The pattern, as a rule, is made up of a number of four-sided pyramids carved on the wood, and the tops of the corner posts are carved so as to resemble jaws, between which the cross-pieces rest. Perhaps these represent the jaws of a crocodile, the pyramids being conventionalized scales. This form of decoration is, however, found among inland people whose acquaintance with crocodiles must have been but slight.

NEW GUINEA : TORRES STRAITS.

SELIGMANN.

Mr. C. G. Seligmann described the seclusion of girls at Mabuiag, Torres Straits.

When the signs of puberty appear, a circle of bushes is made in a dark corner of the girl's parents' house. The girl, now called *Kerngi Gasaman*, is fully decked with cross shoulder-belts of young cocoanut leaf, with leglets just below the knee, with anklets, with petticoat, with chaplet round head, with armlets of cocoanut with cut dracenas in them; with shell ornaments hung on front and back of chest, and with nautilus shell ornaments in her ears. She squats in the centre of the bushes, which are piled so high around her that only her head is visible. This lasts for three months, the bushes being changed nightly, at which time the girl is allowed to slip out of the hut. She is attended by one or two old women, the girl's maternal aunts, who are especially appointed to look after her. These women are called *Mowai* by the girl; one of them cooks food for the girl at a special fire in the bush. The girl may not feed herself or handle her food, it being put into her mouth by her attendant women. No man—not even the girl's father—may come into the house; if he saw his daughter during this time he would certainly have bad luck with his fishing, and probably smash his canoe the first time he went out. The girl may not eat, in the breeding season, turtle or turtle eggs; no vegetable food is forbidden. The sun may not shine on her; "he can't see day time, he stop inside dark," said my informant. At the end of three months a girl is carried to the fresh-water creek by her *Mowai*, she hanging on to their shoulders so that not even her feet touch the ground, the women of

the tribe forming a ring round the girl and *Mowai*, thus escorting her to the creek. Her ornaments are removed, and the *Mowai* with their burden stagger into the creek, where the girl is immersed, all the women joining in splashing water over the three. On coming out of the water, one of the *Mowai* makes a heap of grass for her charge to squat on, while the other runs to the reef and catches a small crab. She tears off its claws, and with these she runs back to the creek, where a fire has meanwhile been made, at which the claws are roasted. The girl is then fed on these by the *Mowai*. She is then freshly decorated, and the whole party marches back to the village in one rank, the girl being in the centre, with the *Mowai* at her side, each of them holding one of the girl's wrists. The husbands of the *Mowai*, called by the girl *Waduam*, receive her, and lead her into the house of one of them, where all eat food, the girl being now allowed to feed herself in the usual manner. The rest of the community have meanwhile prepared and eaten a feast, and a dance is held, in which the girl takes a prominent part, her two *Waduam* dancing, one on each side of her. When the dance is finished the *Mowai* lead the girl into their house and strip her of her ornaments. They then lead her back to her parents' house.

QUEENSLAND.

SELIGMANN.

Dr. C. G. Seligmann presented notes on the Otati tribe of North Queensland, visited in the course of the Cambridge Expedition.

QUEENSLAND.

HADDON.

Dr. A. C. Haddon presented notes on the Yaraikanna tribe, Cape York, North Queensland, visited in the course of the Cambridge Expedition.—The Yaraikanna are fairly typical Australians in appearance; six men were measured, average height 1.625 m. (5 feet 4 inches), cephalic index 74.7 (extremes, 72.4–77.7). A lad is initiated by his *mawara*, apparently the men of the clan into which the boy must subsequently marry; he is anointed with "bush-medicine" in the hollow of the thighs, groins, hollow by the clavicles, temples, and back of knees to make him grow—the bull-roarer is swung. In the *Yampa* ceremony the initiates (*langa*) sit behind a screen in front of which is a tall pole, up which a man climbs and catches the food thrown to him by the relatives of the *langa*. Then the bull-roarer is swung and shown to the *langa*; lastly, a front tooth of the *langa* is knocked out, with each blow the name of a "land" belonging to the boy's mother or of her father is mentioned, and the land, the name of which is mentioned when the tooth flies out, is the territory of the lad. Water is next given to the boy, who rinses out his mouth and gently empties his mouth into a palm-leaf water vessel; the clot by its resemblance to some animal or vegetable form determines the *ari* of the lad. The *ari* appears to be analogous to the *manitu* or *okki* (or "individual totem" of Wazer) of the North American Indians. After the ceremony the boy is acknowledged to be a man. Other *ari* may be given at any time by men who dream of an animal or plant, which is the *ari* of the first person they meet on awakening. The *Okara* ceremony was alluded to, and various customs, among which may be noted, children must take the "land" or country of their mother, a wife must be taken from another country; all who belong to the same place are brothers and sisters.

SCOTLAND.

GRAY.

Mr. J. Gray, B.Sc., gave an account of recent ethnographical work in Scotland. The preliminary observations on the physical characteristics of the people of East Aberdeenshire, begun in 1895 by the Buchan Field Club, were summarised in a paper

in *Proc. Brit. Ass.* (Ipswich), 1895, p. 831, and published more fully in the *Transactions of the Buchan Field Club*.

A pigmentation survey of the whole of the school children of East Aberdeenshire has since been completed, chiefly through the organising ability of Mr. Tocher, the Secretary of the Buchan Field Club, and the generous and gratuitous co-operation of the school teachers. Returns were received between October, 1895, and November, 1897, from over ninety schools, comprising nearly 14,000 children.

The scheme of colours for hair and eyes was practically the same as that of Dr. Beddoe; but his two darkest classes for hair were amalgamated into one. Comparison with Dr. Virchow's survey of German school children would, however, have been facilitated if blue eyes had been separated from other light eyes.

The Pigmentation of the school children (with that of adults added for comparison) is shown in the following table of average results:—

	Hair.				Eyes.			
	Fair.	Red.	Brown.	Dark.	Light.	Medium.	Dark.	
Children, total	25·3	7·0	46·5	21·2	41·0	35·0	24·0
" Boys	23·6	6·8	48·2	21·4	41·6	35·8	22·6
" Girls	26·9	7·3	44·7	21·1	40·6	33·8	25·6
Adults, total	9·5	5·7	64·1	20·7	25·4	48·6	26·0
" Males	9·5	5·6	66·2	18·7	21·3	50·7	22·8
" Females	9·8	6·4	54·8	29·0	21·6	39·0	39·4

A study of this table reveals several noteworthy facts:—

(1) About 15½ per cent. of the fair-haired children become brown-haired adults—almost exactly the same percentage that Virchow found to become brunette in Germany, and about 15 per cent. light-eyed become medium or dark-eyed.

(2) Between boys and girls the percentage of dark hair is practically equal, and the girls have only 3 per cent. excess of dark eyes; but adult females have 11 per cent. more dark hair than adult males, and 16½ per cent. more dark eyes. The darkening of the females is therefore post-natal. Ripley points out the same excessive pigmentation of the females among the Jews, and also in regions like Alsace, where a blonde race has invaded a brunette country.

A comparison with the continental districts whence, according to tradition and history, we have derived a large element in our population, namely, Schleswig-Holstein, Lüneburg, and Mecklenburg-Schwerin, the reputed original seats of the Angles and Saxons, is shown in the following table:—¹

—	Brunette type.	Blonde type.	Blonde hair.	Brown hair.	Light eyes.	Brown eyes.	
Upper Bavaria	24	17	51	48	25·7	34
Schleswig-Holstein	7	43	82	18	50	16
Lüneburg	7	44	83	17	49	18
Mecklenburg-Schwerin	10	42	77	23	49	21
East Aberdeenshire	20·4	16·2	25·3	67·7	41	24

¹ The Aberdeenshire "blonde-type" (including fair hair with light grey eyes, as well as with blue) is rather larger than Virchow's (which includes only the blue eyes), but the "brunette types" are practically the same.

The three North German districts are clearly much more blonde than East Aberdeenshire. Germany, as Virchow's survey has shown, gets more brunette and less blonde from north to south; but we must go to its extreme southern frontier—*i.e.*, to Upper Bavaria—before we find a district approximating in pigmentation to East Aberdeenshire.

It is noteworthy that whereas in Germany (especially in North Germany) there is always more blonde hair than blue eyes, in Aberdeenshire the reverse is the case. Of this, two explanations are possible: (1) that the immigrants from Germany were not pure blondes, but of a mixed variety with brown hair and blue eyes; or (2) that pure blonde immigrants found here a population with brown eyes and hair so black as to resist depigmentation longer than the brown eyes.

The maps of different elements show blonde areas on the accessible parts of the coast, and brunette areas on the inaccessible parts.

The Stature of 169 persons measured at Mintlaw in 1895 averaged 5 feet 8½ inches (which is about the average for Scotland), with three distinct peaks of maximum frequency at 5 feet 7½ inches, 5 feet 9 inches, and 5 feet 11½ inches. Of thirteen persons of 5 feet 11½ inches in height, nine were dark, three brown, and one fair-haired, the other two heights comprise equal numbers of fair and dark.

The Head Measurements show cephalic indices lying almost entirely between 74 and 84, with peaks of maximum frequency at 77 and 79. These indices do not give a satisfactory analysis into race groups; but on plotting the head-measurements on a chart, with the length and breadth as co-ordinates, the people are separated into three groups, coinciding very closely with Beddoe's average dimensions plotted on the same chart; of (1) Italians and Row-grave-men; (2) Danes; (3) Hanoverians. The Danish group is the most numerous, the Italian coming next, and the Hanoverian last. Mixed groups also appear on the chart, having the length of one typical group, and the breadth of another.

[To be published in full in the *Transactions of the Buchan Field Club.*]

UNITED KINGDOM.**BRIT. ASS. COMMITTEE.**

The Seventh (and final) Report of the Committee of the Ethnographical Survey of the United Kingdom presents a summary of the method adopted by the Committee, and of the results hitherto attained; not indeed as suggesting that the work of organising an Ethnographical Survey of the United Kingdom, which was first entrusted to the Committee at the Edinburgh Meeting in 1892, has been completed, but because in the opinion of the Committee the preparation for that work has been carried as far as the means at their disposal have enabled them to carry it, and because they have arrived at the conviction that the work itself may now properly be left to be completed by other hands possessing the necessary organisation and more adequate means.

The method adopted by the Committee was: (1) To inquire what places were suitable for the survey, as containing a population in which there had been comparatively little admixture of race. (2) To draw up a brief and comprehensive code of instructions for observers, with explanatory comments and directions as to the use of instruments for measuring, etc. (3) To enlist the voluntary assistance of local societies and local observers in making measurements, collecting items of folk-lore, and otherwise.

Under the first head, the Committee collected in their first and second reports *Proc. Brit. Ass.* (Nottingham), 1893, p. 621 ff; (Oxford), 1894, p. 419, from the information supplied to them by persons of authority resident in the various districts,

a list of between 300 and 400 villages and places which complied with the definition laid down by the Committee as containing a number of persons whose ancestors had belonged to the locality for as far back as could be traced.

Under the second head, the Committee prepared and published, in their second and third reports (*Proc. Brit. Ass.* (Oxford), 1894, pp. 426-9; (*Ipswich*), 1895, p. 509 ff), a code of instructions for observers in the several branches of the investigation.

The Committee have also published in subsequent reports a paper drawn up by Mr. Hartland (*Proc. Brit. Ass.* (*Ipswich*), 1895, p. 513 ff), containing many useful hints to observers; and a paper by Mr. Gomme (*Proc. Brit. Ass.* (*Liverpool*), 1896, p. 626 ff), on the scientific method to be pursued in localising folklore observations.

In other reports, the Committee have published at length specimen collections of physical observations and folklore observations, the principal of which collections were made by the lamented Dr. Walter Gregor. These are intended to serve as models for other observers, as it was not the intention of the Committee to print at length in their reports the records of observations contributed to them by the several collectors, but only a digest of the results.

The following list of these special reports published by the Committee will facilitate reference:—

Aberdeen, Banff, and Isle of Lewis ..	<i>Proc. Brit. Ass.</i> , 1897, p. 506 ff.
East Anglia (Cambridge Committee) ..	" " " 1897, p. 503 ff.
Galloway (Rev. Dr. W. Gregor) ..	" " " 1896, p. 612 ff.
" Ireland	" " " " 1897, p. 456 ff.
Ireland	" " " " 1896, p. 609 ff.
"	" " " " 1897, p. 510 ff.
Kirkcudbrightshire	" " " " 1897, p. 500 ff.
Lewis (Isle of)	" " " " 1897, p. 506 ff.
Pembrokeshire (E. Laws, F.S.A.) ..	" " " " 1896, p. 610 ff.
Wigtownshire	" " " " 1897, p. 500 ff.
Yorkshire (Cleckheaton)	" " " " 1897, p. 510 ff.
<i>Cf.</i> the lists of unpublished communications ..	" " " 1897, p. 453-4.
"	" " " " 1898, p. 713.

Under the third head, the policy of the Committee has been. (1) To establish Sub-committees in various parts, and secure the co-operation of local societies in forming such Committees and otherwise. (2.) To obtain the services of volunteer individual observers. The Committee feel that their best thanks are due to the societies and persons by whom they have been favoured with information; but they are also of opinion that for the future conduct of the survey, it will not be sufficient to rely upon such assistance, however generously bestowed. To ensure absolute uniformity in the methods of collecting information, upon which the usefulness of the information for the purposes of comparison almost entirely depends, it is essential that one or more persons should be wholly engaged upon the work.

There are two methods by which this can be done. (1) The entrusting to the Committee of the necessary means. (2) The transfer of the work to another body possessing the necessary means. The circumstance that the Ethnographic Bureau, has now been established under the auspices of the British Museum, induces the Committee to lean rather to the second course; and the Committee cannot but think that the Bureau might well include the British Islands within the scope of its functions.

*FOLKLORE, RELIGION, etc.***ANIMISM.****MARETT.**

Mr. R. R. Marett, M.A., read a paper on "Pre-animistic Religion." The term Religion denotes a state of mind embracing emotional and ideal constituents, whereof the former constitute the universal and constant, the latter the particular and variant element. Self-interpretation in ideal terms on the part of the religious emotion of the savage has found most complete and definite expression in Animism, the "Belief in Spiritual Beings." Animism, however, as compared with "Supernaturalism," namely, that state of feeling almost uncoloured by ideas which is the primary form taken by man's Awe of the Supernatural (or extraordinary) is but as the strongest sapling in a thicket of heterogeneous growths, which, in the struggle for existence, has come to overshadow the rest and give a character to the whole. The vagueness of primitive "supernaturalistic" utterance is illustrated by, e.g., *andriamanitra* (Malagasy), *ngai* (Masai), *mana* (Melanesians), *wakan* (North American Indians), *kalou* (Fijians). A "pre-animistic" validity as manifestations of religion thus attaches to a variety of special observances and cults; and it may therefore be interesting in the case of some of the more important of these to distinguish between the original basis of "supernaturalistic" veneration and the animistic interpretation that as the result of successful competition with other modes of explanatory conception (notably "Animatism," namely, the attribution of life and will, but not of soul or spirit, to material objects and forces) is thereon superimposed in accordance with the tendency of the religious consciousness towards doctrinal uniformity. The author illustrates his thesis as follows:—

A. *In regard to the Inanimate.*—(1) Selected instances show the transition through "Animatism" and "animatistic" mythology to Animism in the interpretation of the religious awe felt in relation to extraordinary manifestations on the part of Nature-Powers; (2) the cult of the Bull-roarer displays an almost complete absence of animistic conceptions in regard to the veneration of *Daramulun*, *Mungunningaur*, *Turndun*, *Baiamai* (Kurnai, Murrings, Kamaroi, etc.); (3) in Stone-worship; sympathetic magic in connection with the use of "guardian stones," etc., generates explanatory conceptions tending towards an animistic form.

B. *In regard to the Subanimate and Animate.*—(1) Plant and Animal Worships show how Totemic Magic and, apart from Totemism, the desire for magical communion with extraordinary animals, invite explanations which need not be animistic, though they tend to become so. (2) Among observances connected with the phenomena of human life: (a) dream and trance are the special parent-soil of Animism; (b) awe of the Dead Body, as such, is due to the instinct of self-preservation, an influence which co-operates with the theory of the self-existent soul to bring about the ascription of the "potency" of human remains to that of the surviving spirit; (c) Diseases taking the form of seizure, and those of a convulsive nature, lend themselves almost directly to animistic interpretation; those ascribable to Witchcraft are not necessarily so explained, though the idea of Infection tends this way; the awe of Blood, notably of an issue of blood, is analogous to the awe of the Dead Body, and a crucial proof that "supernaturalistic" veneration may, in regard to certain maladies, assert itself strongly in the absence of animistic colouring.

[To be published in full in *Folklore*.]

BURMAH: NATS.**TEMPLE.**

Colonel R. C. Temple, C.I.E., described the "Thirty-seven Nats, or spirits, of the Burmese." The belief in the Nats, or supernatural beings who interfere in the affairs

of mankind, is universal among all the native inhabitants of Burma of every race and religion. Every writer about the Burmese and their customs mentions the Nats. The subject is, however, still but vaguely understood. The Nats are of three distinct kinds: (1) the supernatural beings due to the Buddhist cosmogony; (2) the supernatural beings familiar to the creatures, objects, and places with which man is concerned due to the prehistoric animistic beliefs of the people; (3) the supernatural beings who are ghosts and spirits of the notorious dead. Of the many orders of Nats thus created, that of the Thirty-seven Nats is by far the best known among the people. These are the ghosts of the departed royalties of fame, and their connections. About them nothing seems to have been previously published in England, and this paper is a preliminary attempt at an adequate representation of them, and of the history, real or supposed, connected with them during life.

[To be published in full, and with full illustrations, in this *Journal*.]

INDIA : FUNERAL RITES.
CROOKE.

Mr. W. Crooke described the "Survival of Primitive Funeral Rites in Modern India," under the following heads:—

(a) Customs connected with the preservation of the corpse, such as various forms of mummification; (b) platform burial; (c) direct exposure of the dead to beasts of prey; (d) general exposure of the dead; (e) the question of the priority of burial to cremation; (f) transitions from burial to cremation, and *vice versa*; (g) disposal of those dying in a state of taboo; (h) shelf or niche burial; (i) crouched or sitting burial; (j) disinterment of the corpse; (k) jar or urn burial; and (l) dismemberment of the corpse.

[To be published in full in this *Journal*.]

ITALY : GUBBIO.
MACIVER.

Mr. D. MacIver exhibited a model of the "Cero" of St. Ubaldino, which is explained as a relic of a pagan Spring Festival observed at Gubbio in Umbria. The model is deposited in the Pitt Rivers Museum in Oxford, and will be described fully at a future meeting of the Folklore Society. Cf. also H. M. Bower, *The Procession and Elevation of the Ceri at Gubbio*. Folklore Society's Publications, No. 39.

LANGUAGE.
NEW GUINEA : TORRES STRAITS.
RAY.

Mr. Sidney H. Ray presented an account of the Linguistic Results of the Cambridge Expedition to Torres Straits and New Guinea.

The geographical position of the Torres Straits Islands renders an accurate knowledge of the construction of the languages important, especially for determining the relation of the Australian languages to those of New Guinea and the Malay Archipelago, and also, perhaps, to languages further west in Southern India and the Andaman Islands. Several missionaries have worked among the Eastern and Western tribes of the Straits, and the existing gospel translations are reputed to have been made by them, but no one has preserved any record of, or can throw any light upon the construction of the languages. The translations were analysed in a former work, *Proc. Roy. Irish Acad.* (3) 1893, ii, p. 463; iv, 1897, p. 119, by Dr. Haddon and myself, but the result was somewhat unsatisfactory. As we had dealt exhaustively with the vocabularies, my attention during my stay in the islands was mainly concentrated upon the grammars of the two languages.

The construction of the Eastern (Murray and Darnley Islands) language was found to be very complex, modifications of sense being expressed by an elaborate system of prefixes and suffixes.

The grammar bears no resemblance to the Melanesian, and but little to the Australian. The speech used in school and church is a debased form of the original; as my native informant described it, "they cut it short." As most of the young people know English, it is very probable that the pure language will die out with the older folk.

The language of the Western tribe was studied at the central island of Mabuiag, but the closely allied dialects spoken on Warrior Island, Saibai, and Prince of Wales Island, were also investigated. The grammar of this language is decidedly of Australian type, though there is no marked connection in structure or vocabulary with languages of the neighbouring mainland. Of these latter, the dialect of the Yaraikanna tribe in the neighbourhood of Cape York was also investigated.

In New Guinea, at Port Moresby, the Motu language is well known, and I used it as the means of obtaining from Koitapu natives some illustrations of their strange language. The results show that there are people living in the Motu villages, whose languages are totally distinct from that of the Motu both in structure and vocabulary. A language (Koiari) similar to the Koitapu was found to prevail in the district inland from Port Moresby.

At Port Moresby I also obtained from some Cloudy Bay natives specimens of their language, which like those of Koitapu and Koiari, approaches the Australian type, but has nothing in common with the Melanesian.

At Bulaa (Hula), Hood Peninsula, the structure of the dialects of Bulaa, Keapara (Kerepunu) and Galoma were the subject of conversations with Kima, the intelligent chief of Hula. These dialects are related to the Motu, and like it, are in grammar and vocabulary very closely akin to the languages of the Melanesian Islands.

At Saguana in Kiwai Island is the Fly River Delta, I took advantage of a fortnight's stay to make a first investigation into Kiwai and Mowata grammar. The language is very difficult, with exceedingly complex forms. It shows some traces of connection with the speech of the Eastern Islanders of the Torres Straits.

PSYCHOLOGY.

NEW GUINEA: TORRES STRAITS.

CAMBRIDGE EXPEDITION.

The following Contributions to Comparative Psychology resulted from the recent Cambridge Expedition to New Guinea and Torres Straits.

I.—*General Account and Observations on Vision, etc.* By W. H. R. Rivers.

Previous work on the psychology of savage peoples has been limited to deductions from their behaviour, customs, and beliefs. The special object of the psychological work of the Cambridge Anthropological Expedition was to employ exact experimental methods in the investigation of the mental character of the natives of Torres Straits and New Guinea. By means of these methods it is only possible to investigate directly the more elementary mental processes, but in the course of such work one meets indirectly with many facts which illustrate the higher and more complex developments of mind.

Observations were made in Murray Island by Messrs. McDougall, Myers, and

myself on about 150 individuals. The subjects investigated included visual acuity, sensitiveness to light, colour vision, including colour-blindness, binocular vision and visual space perception; acuity and range of hearing, appreciation of differences of tone and rhythm; tactile acuity and localisation, sensibility to pain, estimation of weight, smell and taste; simple reaction times to auditory and visual stimuli, and choice reaction times; estimation of intervals of time; memory; strength of grasp and accuracy of aim; reading, writing, and drawing; the influence of various mental states on blood-pressure; and the influence of fatigue and practice on mental work.

In Kiwai and Mabniag fewer observations could be made, owing to the fact that most of the apparatus had been taken on to Borneo, but observations were made by Mr. Seligmann and myself on more than 100 individuals, many of whom were not, however, natives of these islands. The subjects investigated were chiefly visual acuity and colour vision; auditory acuity; smell and touch; writing and drawing.

It is not possible now to do more than give a rough sketch of our results. Most of the methods used had been in some degree modified to meet the unusual conditions, while some were new, and the consequence is that, with one or two exceptions, we have very few data with which to compare our results. The exact bearing of most of our observations will only become apparent when comparative data on European and other races have been collected.

Our observations were in most cases made with very little difficulty and, with some exceptions, we could feel sure that the natives were doing their best in all we asked them to do. This opinion is based not only on observation of their behaviour and expression while the tests were being carried out, but on the consistency of the results. The small deviations of individual observations from the average (mean variation) showed that the observations were made with due care and attention.

The introspective side of psychological experimentation was almost completely absent. We were unable to supplement the objective measurements and observations by an account of what was actually passing in the minds of the natives while making these observations. Attempts were made in this direction without much success.

One general result was to show very considerable variability. It was obvious that in general character and temperament the natives varied greatly from one another and very considerable individual differences also came out in our experimental observations. How great the variations were as compared with those in a more complex community can only be determined after a large number of comparative data have been accumulated.

Another general result which should be of great interest to anthropologists is that the natives did not appear to be especially susceptible to suggestion, but exhibited very considerable independence of opinion. Leading questions were found not to be so dangerous as was expected. It is hoped that when our results are worked out, it will be possible to express in some definite manner the suggestibility of these people as compared with Europeans.

Of the special investigations undertaken by myself, that on visual acuity was the subject of a paper in the Physiological Section of the British Association. Cf. *Proc. Brit. Ass.* (Dover), 1899.

The colour vision of the natives was investigated in several ways. A hundred and fifty natives of Torres Straits and Kiwai were tested by means of the usual wool test for colour-blindness without finding one case. About eighty members of other races, including Australians, Polynesians, Melanesians, Tamils, and half-castes were also tested without finding one case, except among natives of Lifu. No less than

three out of eight natives of this island were found to suffer from well marked red-green blindness of the ordinary type. Unfortunately the number of Lifu natives who could be examined was too small to allow any definite conclusions to be drawn, but the possibility is suggested that colour-blindness may be a racial peculiarity, a fact, which if established, would be of great ethnological importance.

The names used for colours by the natives of Murray Island, Mabuiag, and Kiwai were very fully investigated, and the derivation of such names in most cases established. The colour vocabularies of these islands showed the special feature which appears to characterise many primitive languages. There were definite names for red, less definite for yellow, and still less so for green, while a definite name for blue was either absent or borrowed from English.

The three languages mentioned, and some Australian languages, seemed to show different stages in the evolution of a colour vocabulary. Several Australian natives (from Seven Rivers and the Fitzroy River) appeared to be almost limited to words for red, white, and black. In Kiwai there was no word for blue, for which colour the same word was used as for black, while the name applied to green appeared to be inconstant and indefinite. In Murray Island the native word for blue was the same as that used for black, but the English word had been adopted and modified into *bülu-bülu*. The language of Mabuiag was more advanced; there was a word for blue (*maludgamulnga*, sea-colour), but it was often also used for green.

Corresponding to this defect of colour terminology, there appeared to be an actual defect of vision for colours of short wave-length. In testing with coloured wools, no mistake was ever made with reds, but blues and greens were constantly confused, as were blue and violet. The same deficiency in seeing blue seemed also to be shown in experiments on the threshold of sensitiveness for red, yellow, and blue, carried out with Lovibond's tintometer. Experiments on the distance at which small patches of different colours could be recognised also showed great inferiority in seeing blue as compared with red, but the few comparative observations so far made, do not enable one to say that there is any striking difference between Europeans and Papuans in this respect.

Observations were also made on the colour vision of the peripheral retina, on after-images and on colour contrast.

Observations were made by means of Hening's fall experiment which showed the existence of binocular vision in all except one man with an orbital tumour.

Quantitative observations were made on some visual illusions.

Numerous observations were made on writing and drawing, the former chiefly in the case of children. The most striking result here was the ease and correctness with which mirror writing was performed. In many cases native children, when asked to write with the left hand, spontaneously wrote mirror writing, and all were able to write in this fashion readily. In some cases children, when asked to write with the left hand, wrote upside down.

Experiments were made on the estimation of time. The method adopted was to give signals marking off a given interval; another signal was then given as the commencement of a second interval, which the native had to finish by a similar signal when he judged it to be equal to the given interval. This somewhat difficult procedure met with unexpected success, and intervals of 10 seconds, 20 seconds, and one minute were estimated with fairly consistent results.

Nearly all the investigations gave some indication of the liability to fatigue and the capability for improvement by practice, but these were also the subject of a special investigation carried out by modifications of Kraepelin's methods.

II.—*Observations on Hearing, Smell, Taste, Reaction, Time, etc.* By C. S. Myers.

The conditions for testing acuity of hearing were very unfavourable on Murray Island, owing to the noise of the sea and the rustle of the cocoanut palms. The general results of many experiments lead me to conclude that few Murray Islanders surpass a hyper-acute European in auditory acuity, while the majority cannot hear as far. For the determination of the upper limit of the perception of tone I used Hawksley's improved form of Galton's Whistle. Of the fifty-one Murray Islanders who were investigated, all save one readily appreciated the difference between the pure high note and the noise of the blast that is inseparable from it. Experiments were also made to determine the minimum perception of tone-differences. Twelve Islanders were tested for their sense of rhythm; this was found to be remarkably accurate for 120 beats of the metronome to the minute, and somewhat less so for 60 beats. Most of the subjects had a tendency to vary in the direction of increasing the rate of the taps.

Olfactometry is very difficult to prosecute for various reasons. Until I have made further comparative observations on Europeans, I can draw no certain conclusions as to the relative smell-acuity of the former and the Murray Islanders; but so far as my experiments go, they seem to indicate no marked superiority in the development of this sense among the Islanders. Doubtless hyper-acuity is more common among them, but there seems no reason to believe that they are able to perceive such traces of odour as would be imperceptible to the most sensitive European noses.

Experiments were made to determine the appreciation and recognition of the common tastes—sweet, salt, bitter, and acid. Sugar and salt were readily recognised, acid was compared to unripe fruit; the bitter is the most uncertain—evidently there is no distinctive name for it in the Murray Island vocabulary.

Binet's diagram used for testing visual memory was employed on twenty-eight people with interesting results.

Numerous time reaction experiments were made, more on simple auditory reaction than on simple visual reactions; a few visual choice reactions were also made. The time of the simple reaction is not sensibly longer, but probably in many cases even shorter, than would be that given by a corresponding class of Europeans. The experiments clearly showed the great difference of temperament among the individuals investigated. There was at one extreme the slow, steady-going man who reacted with almost uniform speed on each occasion; at the other extreme was the nervous, high-strung individual who was frequently reacting prematurely, and whose mean variation in consequence was relatively great. Yet the mean variation, save in the choice-times, was extraordinarily low for such unpractised people.

III.—*Observations on the Sense of Touch and of Pain, on the Estimation of Weight, Variations of Blood-Pressure, etc.* By W. McDougall.

The power of discrimination of two points by the sense of touch was investigated in a series of fifty adult males. On half the number of subjects the observations were made on the skin of the thumb, of the second toe, and of the nape of the neck, and on the skin of forearm on all the subjects. There was a general correspondence of delicacy of discrimination in the different parts of the skin tested in any one subject. A few of the subjects showed a very much greater delicacy of discrimination than the others, while the latter showed a fairly uniform delicacy which is considerably greater

than that shown by the short series of white men who have been tested by the same method.

Observations on the sensitivity to pain produced by simple pressure on the skin were made by means of Cattell's algometer. With this instrument it seems to be possible to register accurately the point at which, with increasing pressure, a painful element is first perceived. The sensitivity to pain as thus determined seemed to be, roughly, inversely proportional to the delicacy of touch discrimination in the series of individuals, and in the whole series the sensitivity seemed to be distinctly less than in the short series of white men observed.

Similar series of observations were made on thirty children. It should be understood that the degree of pain produced was in all cases so slight as not to spoil the pleasure and interest of subjects in the proceedings.

The accuracy of localisation of touch sensations was also measured in a number of the same subjects, and temperature spots were mapped out in a few.

In the same subjects a series of observations on the delicacy of discrimination of differences of weight was made, and other series were made with the purpose of determining the degree of suggestibility of the people—the effect of size as appreciated by sight and grasp on the judgment of weight. It was interesting to find that although the abstract idea of weight seemed entirely new to the minds of these people, and no term in their language answered to it exactly, yet their power of discrimination of difference is at least as good as our own.

In the same series of people the blood-pressure was observed by means of Hill and Barnard's sphygmo-manometer during rest, muscular work, mental work and excitement, and slightly painful skin-pressure, and marked variations recorded under these conditions. No series of observations on white men under similar conditions have yet been made for comparison.

MUSIC: TORRES STRAITS, etc.**MYERS.**

Mr. C. S. Myers contributed some observations on Savage Music, dwelling on the interest of savage music for the anthropologist as contrasted with that of the musician. He considered the problem as to how far common fundamental physiological conditions lurking beneath the differences of music were covered over by the various psychological factors inseparable from distinct civilisations. Sympathy was, he considered, the basis of music, including musical and noise sounds, as long as they awakened the required feeling of pleasure in the minds of a suitable audience. The characteristic feature of Murray Island music was the lack of rhythm in the now obsolete tunes that were reproduced in the phonograph. In respect of the complexities of rhythm in other races, Mr. Myers said that from his own observations on the Malays of Sarawak, there were grounds for suspecting the futility of search after quarter-tone music, owing to irregularity of intonation.

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